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ABSTRACT

Five projects are reported that examined factors related to adult learning in nontraditional environments. "Conrad, Montana: A Community of Memories" (Janice Counter, Lynn Paul, and Gary Conti) reports on a group of adults who for over 40 years have been active in building a better community for friends, relatives, and themselves. A 17-item bibliography lists archives, interviews, and articles, books, and records. "Investing in the Capital Assets of Adults" (Allen Moore) assesses the broad economic implications for a Southern community of its citizens' participation in educational activities. "Contrasting Foundations for Learning and Teaching: Selfhood in China and the United States" (Daniel Pratt) examines the influence of cultural traditions on learners. A model is proposed for how people develop a sense of self. "Educational Barriers to Rural Adults" (Stanley Easton) focuses on barriers to educational participation for adult learners in the rural Northwest. "Development and Utilization of Professional Literature: A Survey of Adult Education Professors" (Ralph Brockett) examines the creation of knowledge in an organizational culture. (YLB)

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1990

Cultural Influences on Adult Learning

Papers Developed
By Postdoctoral Fellows and Researchers
At The Center For Adult Learning Research

Under A Grant Funded By
The W. K. Kellogg Foundation

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Foreword

The Center for Adult Learning Research was funded by the W. K. Kellogg Foundation at Montana State University for the purpose of fostering research related to adult learning. The center sponsored postdoctoral fellows throughout North America, doctoral fellows studying in the university's adult education graduate program, and research professors assigned by the university to the center. This volume contains research reports on projects conducted by all three types of personnel associated with the center.

One mission of the center has been to investigate adult learning in real-life settings. Such an approach requires a consideration, examination, and appreciation of the cultural milieu in which the research is being conducted. Culture can have many meanings and is an elusive word to define. For minority groups such as Native Americans who have experienced the oppression of the dominant culture, it is a word with symbolic and emotional connotations. Myles Horton, social justice advocate and founder of the Highlander Folk School, emphasized that the culture is a totality; it is the base and the glue that holds all parts of a society together. Janine Pease-Windy Boy, Indian leader and president of Little Big Horn College, describes culture as the internal set of operating standards that determines how people conduct themselves, communicate, express thoughts and ideas, and make meaning of other's actions. Here, culture is being used in its broadest sense as the common customs, habits, beliefs, and thought patterns that bind a group of people together. Each of the following research projects was bounded by such broad cultural elements. They include a small, rural community; a rural, Southern state; large homogeneous societies; a rural region of the United States; and a small organization oriented to a specific task. These projects examined factors related to adult learning in a nontraditional environment which was far different from the usual pattern of surveying established educational programs. As a result, collectively they suggest that learning is a complicated process that is governed by the culture of the community in which one lives, grows, and operates.

Conrad, Montana: A Community of Memories reports on a fascinating group of adults who for over 40 years have been active in building a better community for their friends, for their relatives, and for themselves. Their inherent belief in their ability to solve their own problems was directed into action through the skills and networks developed by membership in community organizations. This project was organized and directed by Jan Counter, a doctoral fellow at the center. Branching out from her dissertation research, she organized a research team which consisted of another doctoral fellow, Lynn Paul, and a research professor, Gary Conti. Together, they visited Conrad and uncovered the rich traditions, cooperation, and insights that have made this small, rural town a community of memories. In addition to building the unity among the center's staff as a research team, this project documents the special spirit of self-reliance, dedication, and faith in democracy that inspired the pioneers and which was a cornerstone in building the United States into a great nation.

Investing in the Capital Assets of Adults also has a rural setting, but it is in the South. Using secondary data sources, Allen (Bernie) Moore attempts to assess the broad economic implications for a community of its citizens' participation in educational activities. From a methodological perspective, this study is important for two reasons. First, it is an interdisciplinary approach to investigating the societal impact of education. The political debate over the role and methods of education in society during the past decade and the realization that a nation's economic security is directly linked to education have highlighted the importance of linking education to other academic disciplines. Moore, who is an associate professor with a joint appointment in the Department of Adult

Education and with the Institute of Community and Area Development at the University of Georgia, has made an initial effort in this project to utilize ideas from the area of economics and to expand them to address educational issues.

Second, the statistical technique of discriminant analysis, which was used by Moore, deserves closer attention by educators. This multivariate procedure allows the researcher to simultaneously consider several of the variables that might be interacting in the complicated, human process of education. However, what is most important about this technique is that it allows (indeed, it requires!) that the researcher make meaningful decisions about the data and the situation being investigated. Unlike stepwise regression which abdicates decision making to the computer, discriminant analysis requires the researcher to impose some sense on the data before the statistical process begins. Of course, meaningful discrimination of the learners into groups for analysis is dependent upon the researcher understanding the community culture from which the data were drawn. Equipped with such indigenous knowledge, discriminant analysis offers a powerful tool for helping to understand adult learning.

The influence of cultural traditions on learners is examined in *Contrasting Foundations for Learning and Teaching: Selfhood in China and the United States*. Exploring various cultural, social, and historical values and norms, Dan Pratt proposes a model for how people develop self, the unseen construct which defines the essence of each individual. Components for this model are analyzed from the cross-cultural perspectives of China and the United States. Pratt, who is an associate professor of adult education at the University of British Columbia, gathered the data for this report by traveling to China and by directly interacting with people throughout the various strata of the Chinese society. Additional insights were gained by the timing of his visits which were just prior to the traumatic events of the forceful crushing of the democratic movement in the Spring of 1989.

Educational Barriers to Rural Adults focuses on barriers to educational participation for adult learners in the rural Northwest. This modified Delphi survey sought to identify barriers to rural learners as a basis for determining changes and policies needed to improve access to education for those from rural communities. Suggestions for opening access to educational programs to rural residents and ideas for public policy for this area are discussed. The project was directed by Stan Easton while he was with the Department of Educational Leadership at Montana State University; he is currently Professor of Education and head of the Department of Educational Resources at Jacksonville State University in Alabama.

The final project, *Development and Utilization of Professional Literature: A Survey of Adult Education Professors*, examines the creation of knowledge in an organizational culture. Professionals play a key role in creating the knowledge base for a field. While those such as the Conrad, Montana, group who are involved in developing knowledge through community action apply it at the local level, professionals often document their ideas through formal writing. When recorded in the journals for the field, these writing become an institutionalized force influencing the direction of the field. In this study, Brockett uses traditional survey research techniques to assess the reading and writing patterns of professors of adult education who are members of the Commission of Professor of Adult Education, the formal organization of university teachers devoted to adult education. Brockett conducted this survey while an assistant professor of adult education at Montana State University; he is currently an associate professor of adult education at the University of Tennessee.

Conrad, Montana: A Community of Memories

Janice E. Counter, Lynn C. Paul, and Gary J. Conti

Introduction

Three women, all in their eighties, sat in a hospital room talking about their experiences in a special study group and in other community action groups in which they had been 40 years earlier. Their discussion was lively and animated as they recalled in detail the events surrounding their participation in the Montana Study. After all those years, there remained a spirit and pride in what they had accomplished and a commitment to what they would still do in their small rural community of Conrad, Montana.

The year was 1943. The Montana State University System, through a grant from the Rockefeller Foundation, launched an experiment to stabilize small, rural communities in Montana. For 40 years the people of Montana had suffered extensively from drought and depression. Eastern Montana was dotted with ghost towns as people fled the area seeking relief. The research project was supposed to find ways that higher education and especially the study of humanities could stabilize and improve life in small, rural communities. The project, which was very similar to what is today called participatory research, used study groups to research the community's own cultural and historical traditions. The process involved community members in defining the research problem, gathering data, collectively analyzing the data, and interpreting it (Brownell, 1945). The project was called The Montana Study.

Thirteen study groups including the Conrad group were formed over the three years of the project. In the 10-week study period, the groups researched, analyzed, and discussed the following:

1. The composition of the community as to nationality, history, occupation, religion, politics, education, and recreation;
2. How churches, schools, lodges, clubs, and recreation played a part in human companionship and how those human connections could be expanded;
3. The different ways people made a living and how they used their resources;
4. The relationship of the community with the state and nation;
5. The future possibilities for the community and the state;
6. How action could facilitate change by helping to find ways "to gain control over means of making a living and developing the cultural and artistic aspects within the community;"
7. The ability of the group in gathering information, discussing, and using it in a constructive action. (Brownell, 1944, pp. 21-111)

Conducting Interviews

Researchers from the Kellogg Center for Adult Learning Research at Montana State University conducted interviews with people who had participated in five of the study groups. The initial investigation of records and interviews with participants of the study groups in Hamilton, Conrad, Libby, Darby, Stevensville, and Victor indicted that the effect of the experience from the group was different for various participants and communities (Counter, 1989). Two communities, Libby and Conrad, created action groups out of the discussion groups for community development. However, Conrad was the only community which continued the community action group over the next four decades.

Three researchers from the Kellogg Center returned to Conrad to interview eight people who had participated in the Conrad Study Group and Community Action Group to find out why the people in the community stayed active as a group over a 40-year period. The purpose of this study was to examine whether community research done in the Montana Study had long-term impact on community action and development. If it did have a long-term impact, what factors in the study group and the community contributed to the success of community action in affecting change in the community? Secondly, did being involved in the study have any effect on the personal development and empowerment of the participants?

Methodology

A quasi-longitudinal case study was done for the research using historical analysis. The historical research examined the primary documents located in the archives of the Montana Historical Society, Helena, Montana; Montana State University, Bozeman, Montana; University of Montana, Missoula, Montana; and Rockefeller Foundation, Tarrytown, New York. The documents included the official records, day books, correspondence, and evaluations of the Montana Study staff and minutes taken from 10 of the Montana Study Groups which participated in the study.

Oral histories were elicited from eight people who had been active in either the Conrad Study Group and/or the Conrad Action Group. As Guba and Lincoln (1983), wrote, "Personal reminiscences are what add substance and feeling to any study--they help us understand how people lived, what they thought and felt about their work, family, and community" (p. 162). The interviews from eight people were taped and transcribed. Data-base management software (dBase) was used to sort the interviews into theme areas. The 10 theme areas included the following: values, commitment, study group process, spirit, projects, skills, Montana Study, agencies, monitoring, and personal development.

The Conrad Study Group

The Conrad Study Group was formed on October 16, 1945, with 20 people attending. Out of that group, 14 became actively involved in the community research and discussion group. Two teachers, Alicia O'Brien and Ruth Robinson, approached Baker Brownell, the director of the Montana Study, about starting a study group in Conrad. Brownell hesitated. "He hadn't even considered Conrad because it was not as up and coming as Shelby and Cut Bank. They thought Conrad was a pretty slow town. But we were not the kind to accept it. Well, we turned out to be the best chapter" (O'Brien, 1989).

The people in the Conrad Study Group were likely candidates for being successful at the study group process promoted by the Montana Study. The community had a long history of cooperation dating back to the homestead days. The year 1919 brought an end to the homestead era. A drought and an agricultural depression left thousands bankrupt between 1919-1939. "My husband went through the bad years around 1919 when almost everyone went broke. That's when they separated the men from the boys" (O'Brien, 1989). Those who stayed survived by working together with others in the community. "Cooperation was important. They [the farmers] got together to buy the goods they needed like coal for the winter. The could not have afforded to buy it on their own. They learned to help each other" (Keil, 1989). "Even through the Great Depression, we remained optimistic that through working together as a community, we could survive anything" (Floechinger, 1988).

On top of the cooperative spirit, the group was made up of avid learners. Most of the participants came to the study with a wide variety of interest and skills. Many, such as the ministers and teachers, had a formal education while others had an informal education through a progressive, grassroots, agricultural association, the Farmers Union. "We were learning [in Farmers Union] how to conduct meetings, work with people, and give instruction" (Hostetter, 1989). "We learned to do community action in those camps. We learned about the world we live in" (Floechinger, 1989).

According to the minutes of the study group and from the interviews, all participants were actively involved in the community research and the group discussions on the research. "Out of the discussions, problems with the community began to surface" (Hostetter, 1989). Through discussion, the participants, such as the Farmers Union group, learned that they also had something to contribute. They found that each person was important to getting a well-rounded perspective on an issue. "The Study was a tool where we could use our skills to help the community. We were once two groups--townspeople and farmer. The study brought us together. They found out we [the farmers] were doing a lot of things they [the townspeople] did not know about and we [the participants in the study] learned a lot about each other" (Floechinger, 1989).

The Community of Memory

One of the most important discussions for this group was on the changes which were happening so rapidly in their community. The discussion began with the question of what was meant by modernism as found in Conrad. The leader opened by saying

> Modernism...represents the glamour which seeks the new, the distant, and the daring. The tendency seems to be to discard the old and accept the new. The differences among the ideas of the frontier folks and the modern people seemed to be that the frontier people accepted challenges of problems while the moderns seek professional aid; the frontier led to stability of friendship while moderns (have) more acquaintances; frontier people planned a more static society (while) moderns social contacts reach farther. (Marsh, 1945, p. 19)

The group recognized how the changes in transportation and communications were affecting their social, economics, and political world. They recognized that there were changes "to a more competitive society" (Marsh, 1945, p. 20). They decided the advantages of modernization to citizens were better towns, more satisfaction, and pride. The disadvantages were that:

> A wide range of activities, scattered interest, had a tendency to create disunity, and created breakdowns of old-fashioned loyalty. Citizens lose perspective and fail to see their own local problems. (Marsh, 1945, p. 20)

They brainstormed a list of cherished ideals from their old traditions which they hoped could be blended into the new way of living in a changing world. These ideals were as follows:

> 1. The pioneers solved their own problems.
> 2. The pioneers established true friendships in the sanctuaries of their own community.
> 3. The pioneers were visionaries, but stable and knew the proper values in life.
> 4. The pioneers accepted the modern, but measured it in the lights of the true and tried. We need to remember the solid, progressive community is subject to exploitation and guard against it. (Marsh, 1945, p. 20)

This in a sense was what Bellah et al. (1985) referred to as a community of memories. Bellah defines a community:

> As a group of people who are socially interdependent, who participate together in discussion and decision making, and who share certain practices that both define the community and are nurtured by it. The community has a history and so is also defined in part by its memory of its past. (p. 333)

Stories about the community--how it came to be, its hopes and fears, and how its ideals were exemplified by outstanding men and women--defined the community as a way of life. The community members such as the Conrad folks defined "the patterns of loyalty and obligation that keep the community alive" (p. 154). The community's memory tied the past to the present and turned the community toward the future as a community of hope. The values identified by the Conrad Group were such memories and did turn the community toward the future and new hope.

The five values became important themes which influence both the members of the study and the action group. The values guided their actions in community development. They believed they could solve their own community problems. "We didn't have to have outside help" (O'Brien, 1989). "We had come through the Depression and our community needed an awful lot. It was up to us to do it" (Marsh, 1989). They learned to value the friendships and the social networks. "A good community was started. Great cooperation, enthusiasm, and friendships developed which lasted over time. The social aspect of action was great" (Anderson, 1989). "It did not take a big organization to do the projects. We learned that if we worked together we could do it" (Floechinger, 1989). They learned not to turn over their community to others. "It's the kind of thing of which the community has to be aware; that is not letting other outsiders come in and take over. It is not in the best interest of the community" (O'Brien, 1989). They continued to have the visionary ideal of the pioneers and grabbed opportunities for the community. "They have a dream for Horizon Lodge. They wouldn't let go until they have it" (Keil, 1989).

Conrad Action Group

Toward the end of the 10-week study, the 14

participants realized that they along could not bring about the changes in their community that they felt were needed. The group decided to try to form an action group to explore ways to make the "community a better place in which to live" (Marsh, 1945, p. 44). A long discussion was held about who should be in the action group and how members should be recruited. Though there was strong group cohesion, the group realized that an action group needed to be open to a larger cross section of the community. The study group decided the best way to reach more of the people was through all the organizations in the community. "We organized the action group. We planted the seed in people" (Floechinger, 1989). Thirty-five organizations were contacted about the meeting in which "the purpose was to discuss and plan for securing a better community" (Marsh, 1946).

The research group had come to an end. "We ran out of materials on which to work. We felt grieved for two or three years that there were not any more materials for us to use" (O'Brien, 1989). The energy, spirit, involvement, and commitment which were brought together in the Montana Study were transferred to the newly formed community action group.

The first meeting of the action group was held on January 30, 1946. Eighty people, representing the 35 organizations, attended. LeRoy Andersen, the chairman of the action group, used discussion to help the group focus on what was needed to make the community become the best possible place it could be. From the discussions, a new vision of Conrad emerged. When doubt arose about the feasibility of the ideas, Andersen said, "The assumption we will work with is that if we want something bad enough, we will get it" (Marsh, 1946, p. 2). This idea of "we can do" (Keil, 1989) would continue to be important to the way the community thought about new problems and community change. "We never thought of limits. We dived in and got things done" (Floechinger, 1989).

The association became a clearinghouse for community projects. A process emerged which used the method of research from the Montana Study. "The Pondera Education and Recreation Association would meet a couple times a year to see if anything else needed to be done in the community" (Floechinger, 1989). Organizations in the community would bring ideas to the community action group. Members of the community group, using research methods adapted from the Montana Study, would investigate the needs, possibilities, legalities, and executions of the projects. After a need was identified for housing the elderly, "we went to see what was good and bad in places and learned about rest homes" (O'Brien, 1989). The committee returned to the association where the information they had gathered was thoroughly discussed. The group was not afraid to have open discussion on the ideas. This in the long run seemed to bring about better projects and stronger support throughout the community. "We were able to overcome the single issue focus which so many other communities have" (Keil, 1989). When the association supported a project, the members went out and actively campaigned for it. "We went out as a team of three to talk to the county voters and to get people registered. We mobilized the community" (Andersen, 1989).

Organizing a group for community action and running an institution after a successful building project are two vastly different tasks. Many new organizations fail because those who created them are not equipped with the skills or the desire to manage them. This group avoided this pitfall but were yet able to continue their commitment to the project by getting involved on the governing boards for the newly created entity. "When we got something established, we would try to get on the boards" (O'Brien, 1989). In this way they were able to continue to monitor the fruits of their efforts while simultaneously being free to take on new ventures.

The group remained proactive over the next 40 years. "The things that kept us on track were the changes in the economy in the town and in agriculture--the ups and downs. We were always keeping the ups going. We were always busy" (O'Brien, 1989). The list of projects included a nursing home, retirement apartment complex, senior center, swimming pool, irrigation system, and high school. The dreams of this community just did not happen. "A lot of the projects we've done have taken nerve, courage, and friendship" (Keil, 1989).

Personal Growth and Development

The dynamic growth of the community action group paralleled the tremendous personal growth of the individual. However, the attention paid to the community of memory was in direct contrast to the attention paid to their personal development. "I was so busy I didn't have time to think about what it was [personal development]. I never thought about myself. I was too busy being interested in the learning" (Floechinger, 1989). Amidst a group that experienced incredible personal growth, it was a topic that was always superseded by caretaker roles, community action, learning for fun, tackling new problems with enthusiasm, and enjoying the camaraderie of their group. Because they were not cognizant of their personal development, assessment of this was difficult.

The Montana Study impacted the participants personal growth in many ways. The people gained much pride and satisfaction with the successive achievements of the Montana Study and the community action group. "I'm proud we got all this for our community" (Keil, 1989). "I felt a lot of satisfaction in what was accomplished in the Pondera Education and Recreation Association" (Andersen, 1989). A vast amount of knowledge was acquired by the individual about the community, the specific project, and the systems running the organizations. This led to a much broader view of the world and appreciation for its complexity. It opened their eyes to humankind and their struggles. "The Farmers Union and the Montana Study gave us a broader view of things that were important to the world" (Hostetter, 1989).

The Montana Study was significant in the participants personal development by providing them a means to employ the skills and knowledge they had learned through informal and formal organizations such as the Farmers Union. "We learned so much on community action and managing large projects. It was a chance for us to learn community action" (Hostetter, 1989). An important element of learning community action was the problem-posing and research format introduced by the Montana Study.

Each developed an identity within that group by pursuing their interest and developing an expertise. One of the women had an obvious inclination for the financial backing of the projects, and she usually framed comments about the projects in financial information. Even in the summer of 1989, she was well aware of the finances involved in the new swimming pool. "I've got great-grandchildren coming on, and I'm happy they're learning to swim at an early age. Saving one life is worth $400,000" (O'Brien, 1989). Another aspect of their developing identity was recognizing their weaknesses. "I know my limitations. I know what I can't do. But I am chairman of the Nominating Committee for Legacy Legislature. If I have a program, I'll get it done" (Keil, 1989). Group work in the Montana Study and the community action group yielded many positive outcomes for their individual development. One woman discovered the effectiveness of group work. "I learned from the Montana Study about the power of working together and inspiring projects" (Floechinger, 1989). Most agreed they learned the importance of social relation and development derived while working in groups. "It was a lot of work, but it was a lot of fun. We all had a good time (Marsh & O'Brien, 1989). "Meeting all the new people was nice and made me want to continue being around new people the rest of my life" (O'Brien, 1989).

A Kindred Spirit

This group possesses a special spirit that guides them in life. Although they are now in their eighties, members of this group still radiated an invincible spirit of confidence in their ability to overcome obstacles. This spirit and enthusiasm beget action. Although some have lamented the loss of such a spirit in contemporary society, it has a long tradition in American history. In the 19th century, many Europeans considered Americans a special breed of people who were different in their attitudes and values. De Tocqueville observed this spirit in Americans when he visited from France in 1831. He wrote of the practical nature of Americans and of their propensity to band together into community organizations to solve problems. Such an approach was conducive to survival on the frontier. This type of cooperation fostered the egalitarianism that formed the

foundation of Jeffersonian and Jacksonian democracy. At the end of the century, this spirit was still alive in Conrad: "If we could be one community, young--old, black--white, he--she, it has never occurred to me that we aren't all people and that we aren't all equal, that we don't have the rights and ability to do things" (Keil, 1989).

This frontier ethic was deeply ingrained in the Conrad group. As a result, they did not think to ask *if* a problem could be solved, but instead they instinctively began to probe on *how* it could be done. They not only assumed that they had within themselves the ability to solve the problem, but they also expected high quality in the solution. "We take these things for granted because it is a part of our life" (Keil, 1989). "People are optimistic in spite of all the problems" (O'Brien, 1989). Thus, as a result of this spirit, they moved to action on issues and considered barriers as a natural element in the process which would be overcome.

Equipped with this optimism, the action groups provided the members with an organization for learning and doing. In a rural society, it was difficult to develop and focus ideas while in isolation. The organizations provided a place to develop new friendships, to share ideas with an expanding network of peers, and to learn new skills. Meetings often opened with singing and cultural sharing. These bonding functions were followed and strengthened by learning activities and projects that reinforced the member's sense of accomplishment. Collective action through the organization gave them voice, a mechanism for expressing, honing, and implementing their ideas. Because of its specialized nature, the Farmers Union provided a narrow voice, but it was an important beginning.

- Driving 16 miles into a meeting was quite a chore then, but I didn't miss many....We took the truck through a blizzard once. (Hostetter, 1989)
- Out on the farm, we'd say, "Let's get this done so we can go to Farmers Union or a community picnic." (Marsh, O'Brien, & Floechinger, 1989)
- I remember once we had a Farmers Union meeting. It was very important to get there. The roads were so bad. It had rained for days. We had to use the tractor to get there. (Hostetter, 1989)

This voice was broadened once they joined the Montana Study group. By coming into contact with leaders from 35 other groups and by becoming integral members of a broader network, their views and projects became less parochial. The skills and spirit which they had nurtured in the narrower group were now applied on a community level.

A central element of this spirit is a burning commitment to learning. Learning and knowledge were considered fundamental tools for personal development and for accomplishing community goals. Knowledge could either come from books or be generated by people themselves. Thus, it was not uncommon for them to go visit another community to get ideas for a project such as a rest home or to call a meeting of rural people from across the state in the capital in order to discuss the impact of pending tax legislation upon rural schools. However, they held a special reverence for books. They have numerous books in their homes and are especially proud of their role in supporting the local library and in having a library that "you just can't believe it. We have 9,000 people in the county and a circulation of 42,000 books!" (Floechinger, 1989). For them, "books are my most precious possession. My father was a reader, and he read to us before we even went to school. My favorite story about my father is the time he said, 'Kids, I am only going to be able to read one chapter tonight. I was out behind the plow all day'!" (Floechinger, 1989). Significantly, one of the first major action projects of this group was to build a new high school: "we weren't thinking of ourselves; we were thinking of the community and the kids" (Hostetter, 1989).

Thus, this group has a special kindred spirit that binds them together in an uncompromising belief in themselves, in others, and in their ability to solve problems. They trust in people and sprinkle the words "democracy" and "progressive" throughout their conversations. They model these believes in continued openness to others and in ongoing involvement in community projects such as the sheltered workshop and the child care program at the senior center. When it comes to learning, "I al-

ways have a learning project" (Floechinger, 1989).

Conclusions

The Montana Study had an impact on the greater community of Conrad. "The Montana Study had as much influence as anything has had in the community in getting projects rolling" (O'Brien, 1989). It brought about a strong commitment and involvement for bettering the community from those who participated. The study brought together a fairly divergent group of people. It was a tool in which these folks were able to share their knowledge as they worked together, helping to nurture one another.

The Montana Study helped the group to focus on the important values and traditions of the community and thus to build a "community of memory." The study group retold the stories of the pioneers, and they identified the values and traditions which embodied and exemplified the meaning of their community. The five traditions of (a) solving their own problems, (b) establishing true friendships, (c) being visionary yet knowing the proper values of life, (d) accepting the modern but measuring it in the light of tradition, and (e) remembering to guard against exploitation from the outside became themes and guiding lights for the people as they worked together over the years.

When people reflected on their experiences in the Montana Study and community action group, they told about their satisfaction in making their community a good place to live. "The Montana Study and Pondera Education Association were good organizations which became the nucleus of community action throughout the years" (Andersen, 1989). "We brought the whole community together" (Floechinger & Hostetter, 1989). "The Montana Study and the Pondera Education and Recreation Association were tools where we could use our skills to help the community...To get people interested, you need to study about the needs. You can study about how to do a meeting, but if you don't have a purpose, they won't stay. We all talked about what would make this a better place to raise our kids and we looked for new interest" (Floechinger, 1989). "Working together was fun" (Andersen, 1989).

When the people were asked what they would give as advice to the younger generation, they said, "The most important thing to teach young people is to get involved" (Floechinger, 1989). When asked what lessons can be learned from their community, Norma Keil (1989) summed it up the best:

> A community is working together. The way the overall community has been able to work, even though we are individuals or are in small focus groups, is our ability to come together and discuss [issues] over time. We haven't developed into factions, and we have stayed that way. We have been able to listen to others and respect their thoughts as being different from our own. Respecting other peoples' ideas is really important. I think it is remarkable that we have these kind of people to work with in this community. We have people to work with in this community. We have people who work with each other. I hope it continues so the younger generation has as much fun as we have had putting it all together.

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Investing in the Capital Assets of Adults

Allen B. Moore

Human Capital

Investing in the capital assets of adults is one strategy for improving economic development opportunities. Schultz (1961) argued that the benefits of investing in the capital assets of individuals may have a greater economic impact than the production of goods and services. Human capital includes:

- Knowledge, skills, abilities that individuals use in the production of goods and services.
- Those previously acquired (yesterday) knowledge, skills and abilities are known as "stocks."
- Knowledge, skills and abilities currently (today and tomorrow) being developed are known as "flows." (McNamara, Kriesel, & Deaton, 1988)

Schultz (1961) describes these investments in individuals in terms of health maintenance and development, on-the-job-training, formal education, informal study programs and migration to other areas for changing job opportunities. These investments are a direct benefit to the individual...they acquire new skills, knowledge, attitudes, and personal development benefits. Benefits also accrue to communities in which these individuals live, work, play and worship.

Adult continuing education programs are the methods for carrying out these capital investments! By providing continuing education opportunities to a broad spectrum of adults the economic potential of individuals (e.g., literacy skills, job skills, or health promotion knowledge) and communities are improved. Table 1 is a visual conceptualization of the linkage between Human Capital Investment Areas (Column 1), Potential Responses of Adult Continuing Education Programs (Column 2), and Economic Impact Examples (Column 3).

Human Capital Investment Areas. These are the investments that people make in themselves by participating in a variety of educational programs across the life span, from youth to adult to older mature adult. Schultz (1961, 1963), Becker (1964) and Mincer (1984) are examples of the economist perspective on these investments. Career growth and development has been substituted for "migration" cited by Schultz (1961). Migration is based upon the gathering, reflection and decisions made about career information.

Potential Responses of Adult Continuing Education Programs. Adult continuing educators through a variety of public and private agencies currently provide and continually offer programs for adults that are potentially responsive to the human capital investment areas found in Column 1. These program responses address the "stock" (past and present levels of education/training) and "flows" (education and training the individual is currently participating).

McCoy (1977) has presented a framework supporting the notion of various agencies providing a broad range of continuing education programs for adults. Agencies which offer continuing education programs are public and private colleges and universities, business, industry, governmental agencies (e.g., military or law enforcement) as well as libraries, museums, and social service agencies. Currently hospitals are emerging as a major continuing education agency offering community based programs in a variety of areas including smoking cessation, aerobics, diet and nutrition.

Economic Impact Examples. If the potential program responses are provided and adults participate in these programs is it likely that certain benefits will be achieved by both the individual and the community in which these adults live. Economic benefits are based on the assumptions that if adults are in better health, they will work longer (e.g., fewer days absent because of illness) and smarter (e.g., more alert or less prone to accidents). Further, a well educated and trained work force is desired by businesses who want to expand their operations as well as those employers who want to relocate to be close to raw materials, transportation, and trained or educated workers.

Table 1

Continuing Education Program Responses to Human Capital Investment Needs of Adults

Human Capital Investment Areas	Potential Adult Continuing Education Program Responses	Economic Impact Examples
Health development and maintenance	Fitness, stress management, health promotion	Reduced health care costs; increased productivity; longer life span
On-the-job training including apprenticeships	Job improvement, job development, new business development	Expansion of local job market, attract new plants, improved performance on the job; no defects/high quality
Formal education including post-secondary and higher education	Advanced degrees and skill certification	Market the education level of personnel in area to potential employers
Study programs--non-corporate for adults, including "extension" (University extension, cooperative extension, and community serve type)	Job and personal improvement and community development related experiences, culture, arts, and recreation	Improve overall "quality of life" for residents in rural areas. Attract tourists and potential new business to region
Career growth and development (job relocation, career counseling, assessing implications for relocation to new work setting)	Attitudes, values toward work; career interests, aptitudes; benefits and costs associated with job and career mobility	Realistic assessment of employment, job satisfaction; attract potential employees to new or expanding business/industry

Summary. According to Schultz (1961) and other economists, investing in the human capital assets of adults has generated economic benefit to the U.S. and other countries (especially "Third World" nations). The following is a list of assumptions or basic premises about human capital investments which will be explored in the related literature section:

- Higher skilled and better trained are paid more.
- Business/industry leaders tend to view an educated work force as a positive factor in locating plants/firms.
- Education promotes adjustment to technological change.
- Investments in human capital are expected to yield higher productivity.
- Low wage/skill workers do not have resources to invest in human capital development.
- On-the-job training creates a "bond" between employer and employee.
- Strategies are needed to deliver education and training to "Have Nots"--those without access to technology and those with low skill/low wage and dead end jobs.

Review of Related Literature

National studies, (Denison, 1962; Schultz, 1961) regional studies (Ford Foundation 1986; Halfway Home, 1986) and state and local studies (McNamara, Kriesel, & Deaton, 1988) have examined various facets of human capital investments. Popular literature (*Businessweek*, September 19, 1988; *Educational Researcher*, May 1989) have cited the need to understand the deficits in human capital development and to design responses to close these "gaps" (Perelman, 1984) between the educational and

economic "haves" and those "have nots" who do not have the time, money, and necessary information to invest in their own human capital development. The "have/have not" issue raises the following questions:

- Does education, training, and technology produce a "gap between the haves and have nots?
- Does specialized training and education increase the "gap between the haves and have nots?
- Can human capital investments reduce the "gap between the haves and have nots?
- What investment strategies are likely to reduce the "gap between the haves and have nots?

National, Regional, and Local Studies

Several studies on the economic status of the rural South (Ford Foundation, 1986; Halfway Home, 1986) also have focused on the need for investment in education to assure the economic and social vitality of rural communities for the future. Considerable economic research has been undertaken to better understand the link between investment in education and economic opportunity. Schultz (1963) and Denison (1962) both examined the relationship between education investments and national income growth. Both studies found education to account for 30 to 50% of national income growth. Several micro level studies have attempted to identify the impact of local education investments on economic growth (Dorf & Emerson, 1978; Leuck, 1979; Smith, Deaton, and Kelch, 1978; Sulaiman & Husak, 1980). While some of these studies have found a relationship between education and manufacturing growth, the studies do not offer uniform support for the hypothesis that educational investments influence local economic development. McNamara, Kriesel, and Deaton (1988) argue that the situation is in part due to two problems: (a) difficulties of specifying and measuring the products or results of education investments, and (b) the failure of researchers to distinguish between stock (i.e., existing levels of education) and flow (i.e., education and skills under development) concepts when examining the role of education in economic development.

Linkage to Adult Continuing Education

The basic issue concerning adult continuing educators and economists revolve around the following questions: Are the Potential Adult Continuing Education Program Responses (see Table 1) considered to be investments in human capital, and do they influence both personal and community economic growth?

Traditional human capital measures have included data about high school dropouts, cost of public elementary and secondary education, reading, and mathematics criterion referenced scores (CRT) for elementary and secondary students. Few, if any, studies have examined adult measures such as median years of education and participation in education or training sponsored by public or private post-secondary education institutions such as vocational-technical schools and community colleges.

Adult continuing education may be viewed as a strategy for developing the capital assets of individuals in terms of skills, knowledge, attitudes, and personal interests. Human capital development begins at birth and extends throughout the lifetime of an individual. It includes improving human capabilities via child development activities; participation in formal education at the elementary, secondary, and higher levels; entering and staying in the job market; recognizing the need to relocate because of changing job opportunities, health care development, and maintenance; and developing skills to supplement retirement income levels if needed or desired. Some of these activities may be accomplished in a few years via formal schooling while others involve two or three decades such as job choice and career development. Health care development and maintenance may be a lifelong process of monitoring, adjusting, and maintaining a vigorous and healthy life style.

The intersection of human capital development and continuing education is at the adult level...where individuals have assumed such social roles as wage earner, citizen, family member, parent, and have usually reached legal age of 18 years or older. Adult continuing education is a process concerned with assisting adults to

"be all they can be" to achieve control in their own lives and personal relationships. Adult educators are concerned with collaborative efforts with the learner which facilitate learning. The interaction of educator, learner, social conditions, subject matter options, and desired outcomes is a continuous interactive dialogue of striving for awareness, understanding, application, reflection, and assimilation.

Adult continuing education differs from adult training in that the knowledge, skills, and attitudes are not predetermined but emerge as the educator and learner design, begin, conduct, and complete a learning activity. Additional differences would be noted when a learner designs, conducts, and evaluates a self-managed learning project to meet a specific need or interest. The basic difference between training and other adult learning activities is the situation of "expert driven" versus "learner driven" content and methods.

The connections between investing in human capital and adult continuing education are identified by educator, trainer, and learner behaviors. For example, learners (those individuals who are investing time and money in education or training to improve their capital assets) seek to develop and/or maintain a healthy, fully functioning mind and body. Investments of time and money in these activities should yield an alert, fully-functioning individual with physical and mental capacities which can be applied to a variety of work, play, education, and training situations. An assumption would be the healthier the individual, the more likely the individual will be a viable worker, parent, or citizen. Further, healthy individuals are more likely to participate in human capital development through such things as formal education and training activities. Adult educator behaviors focus on establishing a climate for learning by designing a series of experiences with learner involvement to achieve learner interests or goals. Trainer behaviors focus on delivering a predetermined content to achieve specific and sometimes standardized set of objectives. Both the adult educator and adult trainer are striving to produce a change in skills, knowledge, or attitudes that contribute to the "improved" capital assets of the learner. Continuing educators work with adults to:

- Assist in their quest for control...to identify constraints, values, beliefs, conditions, options;
- Renegotiate and recreate conditions of work with acquisition of new skills;
- Realize that situations can be changed and altered;
- Develop their self-esteem and power to challenge and revise situations;
- Instill a sense of control and autonomous behavior;
- Develop alternative ways to view the world and new ways to identify and solve problems; and
- Recognize adult training as an investment in an individual's capital assets (e.g., human capital).

Adult continuing education programs are directly related to community economic development to the degree that they improve the quality of the work force (Carnevale, 1983). Subject matter focusing on basic skills such as reducing the high rate of illiteracy among adults (Sticht, 1983) or offering education and training options for teenagers who may be potential high school dropouts (Sullivan, 1984) has been increasingly recognized as a vital component of any development effort (Rosenfeld, 1985). Almost any activity in a community can be directly related to economic develop if it changes or improves the living conditions such as "quality of life" influencing development decisions (Hekman, 1982). For example, adult education programs can improve quality of life by providing recreation activities and opportunities for youth, adults, and senior citizens. The programs can also provide a more direct link to economic development. Adult education programs can provide specific training to support new or expanding industry, can retrain displaced workers for entry into new career areas, or can update the existing workforce members to help them remain professionally current. Through these activities, adult education can provide a critical link between individuals and communities and their development programs.

Exploratory Analysis of Data

This report is concerned with indicators of

human capital investment, both stocks and flows, and with how these data may be used to assist in describing characteristics of units such as counties. It was a secondary analysis of statewide data regarding the impact of education, training, and related variables.

Initially, the analysis considered basic correlations to assess potential relationships between variables. These data raised some interesting and somewhat confusing results. Next, these data were examined using discriminant analysis. Discriminant analysis allowed for considering the association of multiple variables with a concept (or function) and also for the possibility of describing characteristics associated with selected units (e.g., counties).

These data are reported as an exploratory approach. For example, discriminant analysis is most often used with only one set of variables, that is, where only one grouping variable is examined in relationship to several other variables. However, in this study, each of the variables is used as a grouping variable to examine descriptive and predictive characteristics. Further, discriminant analysis is usually employed to illustrate either descriptive or predictive characteristics. In this report both descriptive and predictive results are presented. Again, the rationale is to raise questions, issues, and concerns about the impact of "stock" and "flow" variables on human capital investments.

The following sections present simple two variable correlational information and discriminant analysis. Variables are identified in the Pearson Correlation section and are further described in the Discriminant Analysis section.

Pearson correlations and discriminant analysis procedures were used to analyze the secondary source data from 159 Georgia counties. Correlations are presented in Table 2. Discriminant analysis is reported in mini "case studies" of the data where dependent variables are used as grouping variables (e.g., high and low) and the remaining variables are considered outcome variables to indicate association (descriptive analysis) or group membership (predictive analysis).

Correlation Analysis

Several traditional human capital variables were investigated using Pearson correlations. They youth reading and mathematics CRT scores from 1984-85, the cost of education per pupil for 1984-85, the percent of population with less than eight years schooling for 1979, the high school dropout rate for 1984-85, the adult per capita income for 1986, the county population for 1986, and the number of adults employed in 1986. In addition, two adult continuing education variables which are not usually reported in human capital studies were included; these were the number of post-secondary vocational education students per 1,000 persons in 1986 and the number of occupational continuing education students in the university system per 1,000 population in 1986.

Correlation Results

When considering the relationship of high school dropouts, educational costs, and reading and math criterion scores (see Table 2), it appears that there is a negative relationship between education costs and high school dropout rate. As investments in public elementary and secondary schools increase, the high school dropout rate declines. Potential dropouts could be receiving more attention and thus perform better and those students leaving school could decline. Also, as reading and mathematics CRT scores increase, the dropout rate increases. If students with lower CRT scores dropout those remaining in school could be over represented with higher reading and mathematics CRT scores.

However, one confusing finding from these data is the relationship between education costs and reading and mathematics scores. As reading and mathematics scores increase, educational costs decrease. This correlation implies that there may be some economic efficiency gained by increasing reading and math CRT scores or that it is less costly to achieve higher reading and math scores. Other data in Table 2 (see column labelled Less 8 Years Schooling) indicate that there is a negative relationship between population, income, and employment and level of schooling. That is, as more people move into an area, as the income level of county residents increases, and, as the employment rates increase, the percent of adults with less than an eighth

Table 2

Correlation of Human Capital Variables for Georgia's 159 Counties

	Youth			Both	Adult	
Variables	Drop-outs	Educ. Costs	Test Scores	Less 8 Yrs. Schooling	Voc. Educ.	Occup. Educ.
Dropouts	---					
Educ. Costs	-.44	---				
Math & Reading Scores	.54	-.50	---			
Population	-.06	.28	.11	-.57	.02	.06
Income	-.03	.22	.09	-.65	.04	.27
Personal Emp.	-.09	.30	.08	-.46	-.01	.06
Percent Emp.	.01	.14	.13	-.37	-.04	.05

grade education tends to decrease. These data imply the need to further examine the human capital investment question. Additional data is needed regarding the educational levels of people moving into communities, the types of training received on the job, salary levels upon entry into a job and salary increases, if any, after being on the job as a result of continuing education or training.

While education is viewed as a capital building process by Schultz (1961) and others (Becker 1964; Mincer 1984), it is apparent from these preliminary findings that there is little support for these beliefs. Researchers concerned with economic development, which includes education as a process for empowering adults, need to work closely with economists, sociologists, adult educators, and human resource developers to specify both the stock (existing) and flow (under development) variables associated with the results of investing in human capital. One way of identifying potential variables is to specify and generate measurements of factors which may be incorporated into further economic analyses. Discriminant analysis is one such technique that lends itself to exploring possible variables and combinations of variables which may be associated with specific human capital investment indicators.

Discriminant Analysis

The situation examined was that of investigating the importance of several variables assumed to be associated with human capital investment notions and continuing education. These variables reflected previous experience (i.e., participation in elementary and secondary education) as well as more recent activities in continuing and vocational education. Indicators for these variables were collected and coded for 159 counties in Georgia.

A technique for exploratory analysis of these data is to use one variable to define two groups (i.e., high and low). The remaining variables then play the role of outcome variables for description purposes (Huberty, personal communication, October 1989). This procedure lends itself to discriminant analysis where outcome variables can be used to distinguish between two or more known groups (Nie, Hull, Jenkins, Steinbrenner & Brent, 1975).

Huberty and Barton (1988) are critical of authors, instructors, computer programmers, and statisticians who do not use a common definition of discriminant analysis. They conclude that the two general purposes for using discriminant analysis are prediction and description. In this study, discriminant analysis was applied first as a descriptive tool to the data from Georgia. Georgia has 159 counties. However, when the data were grouped according to criteria for low or high counties, data from fewer than 159 counties were analyzed. Discussion about the descriptive technique related to which output variables characterize the high/low or "have/have not" counties? The em-

phasis of these analyses are toward exploring the collection and study of data for selected variables thought to be associated with investments in the human capital of adults.

However, predictive discriminant analysis may be appropriate if the researcher is interested in predicting association with one or more groups. Although Huberty and Barton (1989) argue that is it not appropriate to use these techniques interchangeably, the use of predictive discriminant analysis is presented in this report to raise additional issues about trying to predict association with "have" or "have not" counties.

Separate tables and discussion sections are presented for both descriptive and predictive techniques. The descriptive research question was: What are the differences in terms of outcome variables that help to characterize groups? Descriptive analysis examined how a set of characteristics could discriminate between groups (Klecka, 1980, p. 8-9). The predictive research question was: Can a set of outcome variables be used to predict association with a particular group? Predictive analysis is a way of combining group characteristics into a discriminant function which facilitates group assignment or association (Klecka, 1980, p. 8-9).

"Haves and Have Nots"

For discussion purposes, each variable was entered into the analysis as a grouping variable identified as either "low" or "high". The middle group was omitted in order to generate a dichotomy or polar portion. Counties with high values for a given set of variables were considered "haves"; likewise, those with low values were considered "have not". Perelman (1984) makes a point about adults who represent "have not" groups in society. They have few skills, are employed at low paying jobs and have few options for investing in their own human capital development. Likewise, one of the research questions for this data set was to explore the possibility that counties (and groups of individuals in counties) do not have the necessary experiences and resources to improve their human capital situation.

Outcome Variables

Discriminant analysis was used to assist in exploring the difference between two groups of counties in Georgia--the "haves" and "have nots" on the basis of selected outcome variables of participation rates in continuing education for 1986, participation in vocational education in 1986, high school dropout rates in 1985, median years of education in 1979, per capita income levels in 1986, cost of education per pupil in public elementary and secondary schools in 1985, combined reading and mathematics criterion referenced scores in 1985, and number of persons employed in the county in 1986. The data for less than eight years education was omitted from the analysis because of high correlations with median years of education. By analyzing the contribution of outcome variables to the discriminating function, the relative importance and association of these variables to the two groups of high and low for the dependent variable was judged.

For the following discussion, each analysis is presented like a "mini" case study. Each is presented independent of the other in hopes of generating questions and raising the potential for identifying additional variables that might be explored in subsequent studies. Profiles of high and low groups of counties are proposed to describe the impact of selected variables on investments in human capital. For example "have" counties exhibit high rates of participation in continuing education, high rates of participation in vocational eduction, low high school dropout rates, high median years of schooling for residents, high levels of per capita income, high rates of (investment) cost per pupil expenditures for education, high combined reading and mathematics (CRT) scores, and high rates of persons employed in the county. Conversely, "have not" counties exhibit opposite characteristics for these variables such as low rates of participation in continuing and vocational education and high dropout rates from high school.

Discussion of Variables

Participation in continuing education (CONT-ED) is a basic concept of human capital investment. Participation in occupational continuing education programs at the 34 Georgia System institutions includes both two and four year institutions. The data was obtained in 1986

and is specified in rates per 1,000 people for the respective counties. A "high" participation rate county is designated at 13 or more participants per 1,000 population. "Low" participation rate counties are designated 2 or less participants per 1,000 population.

Participation in vocational education (VOC-ED) for 1986 was expressed as a rate for the number of adults per 1,000 people in the county attending vocational-technical institutes. High and low participation categories were the same as for vocational education as for continuing education (i.e., Low = 2 or less and High = 13 or more).

Dropouts (DROPOUT) refer to the rate of high school students who dropout prior to graduation. These rates were based on dropout percentages by county for 1979. A "high" percentage dropout rate was designated a 33 or more, and a "low" rate was 14 or less.

Median years of schooling (SCHOOLING) are the number of years of schooling for county residents cited in census reports for 1979. A "high" rate of schooling was set at 12.1 or more years (i.e., high school graduate) and a "low" rate was set at 10.0 or less years.

Per capita income (INCOME) was based on the individual income for residents in a county for 1986. A "high" rate of income was designated at $12,000 or more, and a "low" rate was considered to be $9,000 or less.

Each school system invests or spends money for each student in the system. The cost of education (COST) was determined by dividing the amount of money spent by a given county by the number of students in the system. This produced a per pupil cost for the 1984-85 school year. A "high" cost or investment amount was designated at $2,300 or more, and a "low" cost or investment was specified at $2,000 or less.

Reading and mathematics criterion (SCORES) referenced scores were combined to yield a score for students within each county for the 1984-85 school year. A "high" combined score was considered to be 426 or more, and a "low" score was considered to be 387 through 405.

The number of persons employed (EMPLOYED) provides an indicator of the human capital investments at the county level. A "high" rate of employment was considered to be 15,000 or more, and a "low" rate was 3,300 or less.

In sum there were eight measures obtained for each of the 159 Georgia counties. These measures are presented one at a time. Each variable was treated as a "two group" dependent variable with the other seven variables playing the role of outcome measures. The outcome measures were used to describe "have" and "have not" groups of counties associated with high and low group characteristics.

Variables in the Analysis

Eight variables will be used in both the descriptive and predictive techniques presented in this section. Each variable was identified by a code.

- CONT-ED--Participation rate in public continuing education programs at University System's institutions per 1,000 people in a county--1986.
- VOC-ED--Participation rate in public vocational education programs at Voc-Tech schools per 1,000 people in a county--1986.
- DROPOUT--High school drop out rate (percentage) per county--1985.
- SCHOOLING--Median years of schooling for county residents--1979.
- INCOME--Per capita income--1986.
- COST--Cost of education per pupil for public elementary and secondary education systems by county--1985.
- SCORES--Combined scores of reading and mathematics for students in public elementary and secondary schools--1985.
- EMPLOYED--Number of people employed by county--1986.

Descriptive Discriminant Analysis

For the descriptive analysis, one variable was designated as a grouping variable for high and low categories, and the remaining variables were examined for their association with the discriminant function. Indicators of association with a group were specified by partial F values (F-to-remove) and the structure coefficients.

F-to-Remove

The F-to-remove (partial F value) is used to

Table 3

Partial F Values for Human Capital Variables

Variable	CE	VE	SCORES	DROP	EMPL	INCOME	COST	SCHOOL
CONT-ED	....	.06	1.00	9.38	1.15	6.91	3.01	.01
VOC-ED	.39	....	.73	3.69	1.07	.02	.08	2.36
SCORES	.11	.01	....	.09	.06	.01	.01	6.78
DROPOUT	.10	.21	.19	....	6.57	4.49	7.72	.57
EMPLOYED	.02	2.96	.47	1.36	....	.02	.23	.75
INCOME	9.37	.30	.52	1.85	6.45	....	1.41	8.59
COST	.44	2.70	.03	.63	.01	.59	....	.59
SCHOOLING	.01	.01	1.72	1.89	25.26	29.86	1.02	....

indicate the "power" of each selected variable. The variable with the largest "F-to-remove" makes the greatest contribution to overall discrimination between groups by the function or set of outcome variables. The F-to-remove value is used as a criteria for identifying outcome variables which seem to be associated with the grouping variable. (Huberty, 1984; Klecka, 1980 p. 57)

Structure Coefficients

The structure coefficients are bivariate correlations which indicate the relative importance of a variable to the discriminant function. Also, functions may be named based upon the "strength" (size of the coefficient) of one or more variables in the function. A structure coefficient tells how closely a variable and function are related. When the structure coefficient is near zero, the variables have very little in common (Klecka, 1980, p. 31). Pedhazur (1982) suggests that a structure coefficient of at least .30 be treated as meaningful (p. 704). Further, the square of the structure coefficient indicates the proportion of variance of the variables that is accounted for by the given discriminant function (p. 702). Therefore, structure coefficients are used as indicators of the "importance" and "contribution to association" a given variable has with the discriminant function.

Participation in Continuing Education

It appears from the descriptive analysis (see Table 3 and Table 4) that when participation in continuing education is divided into high and low groups, the single variable of per capita income (INCOME) makes the greatest contribution to discriminating between the groups. The "F-to-remove" and structure matrix (correlation) are very high for the per capita income variable. The structure matrix indicates that the three variables of number of persons employed (EMPLOYED), median years of education (SCHOOLING), and criterion referenced scores (SCORES) are also helpful in discriminating between groups. However, the most important discriminating variable was per capita income (INCOME).

These findings are consistent with literature in adult continuing education which indicates that the "haves" are more likely to participate in continuing education. A "typical" participant (Aslanian & Brickell, 1980; Swanson & Mosier, 1983) is more likely to be white, under age 40 (25-40), have completed high school, have an above average income (25,000), and be employed in a professional or technical occupation.

Participation in Vocational Education

Two variables contributed to the discrimination between groups (see Table 3 and Table 4). The "F-to-remove" information indicates that cost of education per pupil (COST) and numbers of people employed (EMPLOYED) were important variables in distinguishing between groups. The structure coefficients for these variables are relatively high indicating that they are helpful in

Table 4

Structure Matrix Correlations for Human Capital Variables

Variable	CE	VE	SCORES	DROP	EMPL	INCOME	COST	SCHOOL
CONT-ED	....	-.07	-.06	.67	.14	.45	-.27	.22
VOC-ED	-.06	....	-.08	.21	.20	.21	.16	.16
SCORES	.32	.30	....	.19	.27	.18	.44	.49
DROPOUT	-.02	-.42	-.05	....	.24	.04	.74	.12
EMPLOYED	.34	-.55	.48	-.12	....	.27	-.39	.32
INCOME	.90	-.23	.71	.03	.60	....	-.38	.67
COST	-.14	.53	-.40	-.36	.01	.23	....	-.03
SCHOOLING	.34	-.19	.78	-.11	.81	.75	-.12	....

discriminating between groups. The name of this should reflect employment, cost, and dropout rates as a construct. Literature in continuing education (Aslanian & Brickell, 1980, Swanson & Mosier, 1983) seems to confirm that those who are most likely to participate in continuing education and possibly vocational education have completed high school and are more likely to be employed (high participation is associated with more technical occupations). It also seems reasonable to suggest that those counties making a higher investment in education (COST) would be associated with lower dropout rates and with opportunities for employment for these high school graduates.

Reading and Mathematics Scores

When grouped by criterion referenced scores for reading and mathematics, median years of education (SCHOOLING) and participation in continuing education (CONT-ED) are important discriminating variables (see Table 3 and Table 4). However, when considering a name for the function and which variables are contributing to the discriminant function, median years of education (SCHOOLING) and per capita income (INCOME) were the two largest values noted in the structure matrix. Also, employment (EMPLOYED) and investment in education (cost of education per pupil--COST) appear to contribute to the discriminant function.

Regarding the structure matrix correlations, it seems reasonable to expect high CRT scores to be related to success in school. Success in school would then be reflected by continuing attendance (rather than dropping out) and possibly indicate better opportunities for employment and higher per capita income. These suppositions are reflected in the participation literature for adult continuing education (e.g., Aslanian & Brickell, 1980; Swanson & Mosier 1982). Further, these assumptions are also linked to the premises of human capital investments where investments in education are reflected in better prepared individuals (High CRT scores) who are expected to be more competitive for jobs (higher per capita income) and will likely participate in more education (higher median years of education).

High School Dropout Rate

Variables (see Table 3 and Table 4) which seem to be related to high school dropout percentage, as indicated by the size of partial F values, are participation in continuing education (CONT-ED) and participation in vocational education (VOC-ED). However, when attempting to name the discriminant function, participation in continuing education is the single variable which has the highest structure matrix correlation. Also, cost of education per pupil (COST) is associated with dropout rate.

Participation literature (Aslanian & Brickell, 1980; Swanson & Mosier, 1983) in adult continuing education supports the notion that those who continue in the school system (...they do not dropout of high school or post secondary education...) are more likely to participate in continuing education programs. This indication is espe-

cially noted in persons employed in technical occupations but is reflected across occupation and for people in the 25-55 years of age range.

Persons Employed by County

Outcome variables which are related to employment as indicated by partial F values (see Table 3 and Table 4) are median years of education (SCHOOLING) followed by high school dropout rate (DROPOUT) and per capita income (INCOME). When naming the function, the variables which seem to contribute most to the discriminant function are median years of education (SCHOOLING) and per capita income (INCOME). Dropout rate (DROPOUT) does not contribute much to the discriminant function.

Drawing upon the premises of human capital theory (Becker, 1964; Mincer, 1984; Schultz, 1961), participation in education is related to access of employment. Therefore, participation in various forms of continuing education is considered to be investments in the individual's human capital assets, and these findings seem to "fit" the model. Higher rates of employment are a reasonable expectation for people with higher median years of education. Further, higher rates of employment are related to a higher per capita income level.

Per Capita Income

Results of the descriptive discriminant analysis in Table 3 and Table 4 indicate that median years of education (SCHOOLING), participation in continuing education (CONT-ED), and high school dropout rates (DROPOUT) are important variables associated with per capita income levels. Perhaps a single variable, median years of education (SCHOOLING), from the structure matrix correlation can be used to name the discriminant function. Participation in continuing education (CONT-ED) also seems to contribute to the discriminant function. Per capita income seems (see McNamara et al., 1988) to be a function of the past (stocks) and current (flows) education and training levels of the individual. Both human capital theory (Becker, 1964; Mincer, 1984; Schultz, 1961) and the premises underlying adult continuing education (Knowles, 1970; Knox, 1977; Naisbitt, 1982) support the notion that initial and continuing participation in education and training will be required to enter and compete for employment in a changing technological society.

Cost of Education Per Pupil

Public elementary and secondary school systems invest in the human capital potential of youth and young adults. The rate of investment or the cost per pupil in the public school system is an indicator of the importance placed on human capital investments at the local level. Several outcome variables (see Table 3 and Table 4) are related to these costs (or investments). They include high school dropout rate (DROPOUT) and participation in continuing education (CONT-ED). To a somewhat lesser degree of importance are per capita income (INCOME) and median years of education (SCHOOLING). High school dropout rate (DROPOUT) seems to be the single variable that best reflects the discriminant function with some contribution from criterion referenced scores (SCORES), employment rates (EMPLOYED), and per capita income (INCOME).

An argument could be presented that more money would be available for investing in fewer students as dropout rate increases. However, this would imply that school systems might seek higher dropout rates in order to have more resources to support the education of those who stay in the system. Many educators would reject this argument as being elitist and discriminating. Yet, this might be a conclusion drawn from some school data where high school dropout rates exceed 25%. In fact, educators are trying to identify factors associated with dropout prone youngsters and to apply resources, such as ideas, programs, faculty and funds, to reducing the number of students leaving school without employment and basic survival skills.

Median Years of Education

Median years of education is an indicator of an individual's human capital "stock" (McNamara et al. 1988). The partial F values presented in Table 3 indicate that outcome variables associated with the education level of county residents are per capita income (INCOME), criterion referenced scores for reading and mathematics (SCORES), and participation in

Table 5

Summary of Descriptive Analyses

Variable	Largest F-to-Remove Values	Strong Structure Matrix Corr.
Continuing Education (CONT-ED)	Per Capita Income	Per Capita Income (.90); Employed Persons (.34); Median Years of Education (.34); Criterion Reference Scores (3.2)
Vocational Education (VOC-ED)	Cost of Education Per Pupil; Employed Persons	Employed Persons (.55); Cost of Education Per Pupil (.53); Dropout Rate (-.42)
Criterion Referenced Scores (SCORES)	Median Years of Education; Participation in Continuing Education	Median Years of Education (.78); Per Capita Income (.71); Employed Persons (.48); Cost of Education Per Pupil (-.40)
Dropout Rate (DROPOUT)	Participation in Continuing Education; Participation in Vocational Education	Participation in Continuing Education (.67); Cost of Education Per Pupil (-.36)
Employed Persons (EMPLOYED)	Median Years of Education; Dropout Rate; Per Capita Income	Median Years of Education (.81); Per Capita Income (.60)
Per Capita Income (INCOME)	Median Years of Education; Participation in Continuing Education; Dropout Rate	Median Years of Education (.75); Participation in Continuing Education (.45)
Cost of Education Per Pupil (COST)	Dropout Rate; Participation in Continuing Education	Dropout Rate (.74); Criterion Referenced Scores (.44); Employed Persons (-.39); Per Capita Income (-.38)
Median Years of Education (SCHOOLING)	Per Capita Income; Criterion Referenced Scores; Participation in Vocational Education	Per Capita Income (.67); Criterion Referenced Scores (.49); Employed Persons (.32)

vocational education (VOC-ED). Variables from the structure matrix correlations (Table 4) which seem to characterize the discriminant functions are per capita income (INCOME) and to a lesser degree criterion referenced scores (SCORES) and county employment (EMPLOYED).

There are some economic reports and studies (Carnevale, 1983; Perelman, 1984) that indicate a relationship between education, income, and employment. There are many studies that specify or imply that problems of little or no education are directly related to unemployment or underemployment. Thus, the one's educational level can influence the ability to generate personal income.

Summary

Descriptive discriminant analysis examines the variables in the discriminant function and their strength of contribution to the function. Table 5 displays the variables identified in each function and their contribution (strength or power) associated with the function.

Data presented in Table 5 *are not* the usual display of descriptive discriminant analysis results. Even though each of the eight variables were examined individually it may be beneficial from an exploratory position to look at these separate analyses to raise questions about the propositions and premises of human capital investments.

Regarding the F-to-Remove values for this data set, per capita income (INCOME) is a variable which appears to be associated with participation in continuing education (CONT-ED). Per capita income is also associated with the number of persons employed in a county (EMPLOYED) and median years of education (SCHOOLING). This association across analyses is consistent with the literature in adult continuing education where typical profiles of participants are employed, have middle incomes (e.g., $20,000 annually), and usually have education attainment levels beyond high school.

Median years of education (SCHOOLING) appears to be associated across analyses with criterion referenced scores (SCORES), number of employed persons (EMPLOYED), and per capita income (INCOME). These associations could be related to the premise that these individuals (and counties with individuals) who have higher educational attainment levels are likely to score well on standardized tests, have more options for employment, and thus have higher income.

It is interesting to note that participation in either continuing education or vocational education "shows up" several times in the F-to-Remove column. Participation in continuing education appears to be associated across analyses with criterion reference scores (SCORES), dropout rate (DROPOUT), per capita income (INCOME), and cost of education per pupil (COST). Vocational education participation is noted for dropout rate (DROPOUT) and median years of education (SCHOOLING). Dropout rate is the only variable where both participation rates appear to be associated with this variable.

Examining the structure matrix columns of Table 5 and using the highest correlation value as an indicator, it is noted that median years of education is associated with CRT scores (SCORES), employed persons (EMPLOYED), and per capita income (INCOME). Perhaps it is most beneficial to examine each variable on an individual basis to look for consistency between variables identified in the F-to-Remove column and those noted in the structure matrix. In all but one case, (i.e., vocational education) the variable with the highest F-to-Remove value is also the variable with the largest structure matrix correlation. For vocational education, the F-to-Remove variables and structure matrix variables indicate cost of education per pupil and number of employed persons as the two highest ranking variables. These data are indicative of consistency in being able to identify the variable making the most contribution to the grouping variable.

What is not readily apparent is why a variable not identified in the F-to-Remove column "shows up" in the structure matrix as a variable being associated with the grouping variable. In most cases, these are lower correlation values associated with the grouping variable and thus do not contribute as much as the higher correlation value variable.

Another situation is noted when the F-to-Remove variable is not found in the structure matrix with a correlation of .30 or greater. For example, regarding dropout rate (DROPOUT), participation in vocational education is not in the structure at .30 or greater. An explanation could be that participation in vocational education may help to identify high or low dropout rates, but this variable is not as much associated with the grouping variable as are participation in continuing education and cost of education per pupil.

It must be restated that it *is not* the traditional procedure to look at variable associations across analyses. However, this is done only to raise questions about the assumptions, premises and propositions about human capital investments as they relate to adult continuing education.

Predictive Discriminant Analyses

Predictive analysis is concerned with the canonical discriminant function and the classification results. These statistics help to explaining the ability of the discriminant function to predict group membership.

Canonical Correlation

The canonical correlation is used to judge the utility of a discriminant function. It is a measure of the association between the groups and the discriminant function (Klecka, 1980, p. 36). A canonical correlation of zero indicates no association whereas a high value such as .77 indicates a substantive relationship. Thus, the canonical correlation is an indicator of how well the function is doing. If the groups are not very different on the variables being analyzed, then all the correlations will be low (Klecka, 1980 p. 37). The canonical correlation squared (also called Eta) is the proportion of the variation in the discriminant function explained by the groups (Klecka, 1980, p. 37).

Wilk's Lambda

Wilk's lambda is the inverse of the canonical correlation so a low Wilk's (for example, .11) is indicative of a relatively high discriminating power between groups. Another companion statistic is the group centroid (i.e., location of the variable means for different groups). If Wilk's lambda is low, it is also an indicator of the separation of group centroids. Also, if Wilk's lambda is high (for example, 1.00), then the group centroids are equal, and there is thus no separation or distinction between groups. (Klecka, 1980, pp. 37-39)

Additionally, a significance test for Wilk's lambda is a conversion to Chi-square. Thus, if a particular analysis yields a significant Chi-square it can be assumed that the results (i.e., Wilk's lambda calculations) did come from a population which did have differences between groups (Klecka, 1980, p.40).

Classification Results

Klecka (1980) describes classification results as how well a specific case can be assigned, belongs to, or more closely resembles a particular group (e.g., high dropout rate or low dropout rate). For the Georgia data set, classifications were computed for both "low" and "high" groups. Those counties not meeting either the low or high criterion level (e.g., 2 or less and 13 or more persons per 1,000 population participating in both continuing education and vocational education) were not included in the classification analysis. Thus, there are counties in each situation that were not "classified" by the discriminant analysis.

Participation in Continuing Education

The canonical correlation for participation on continuing education accounted for a low proportion of variance; the canonical correlation of .64 accounts for only 41% of the variance in the analysis. The Wilk's lambda was relatively high at .59. The Chi-square ($\chi^2 = 12.56$, $df = 7$, $p = .08$) was non-significance.

Classification results for 29 counties that met the participation criteria indicate that it is about the same probability (82%) of assigning a county to either a low or high rate of participation. Slightly better than eight out of ten times a county could be correctly assigned to the appropriate rating group of either low or high with this function. Based on these results, participation in continuing education is not a very reliable or strong predictor of whether a county could be assigned to a high or low participation rate group.

Participation in Vocational Education

The canonical correlation for vocational education participation of .49 only accounts for 24% of the variance in this analysis. The Wilk's lambda was high at .76. The Chi-square ($\chi^2 = 6.25$, $df = 7$, $p = .52$) was non-significance.

Classification results are also disappointing. Only 71% of the cases were grouped correctly. While it may be easier to assign a high participation rate county to its appropriate group (77%), only two out of three times will the assignment be correct for the low rate county. These results offer little confidence in being able to correctly assign counties to a high or low group. In other words, participation in vocational education is not a very good predictor of a county being in the "have" or "have not" category.

Criterion Referenced Scores

Can criterion referenced scores for reading and mathematics be used to predict whether a county belongs to a particular group such as a

"have" county (high score) or a "have not" county (low scores)? Data regarding the canonical discriminant function and the classification results indicate that consistent prediction of group membership is highly unlikely.

The canonical correlation (.60) and Wilk's lambda statistics (.65) are out of range predicting group membership with a non-significant Chi-square ($\chi^2 = 9.86$, $df = 7$, $p = .20$). Also, the classification results are very poor for predicting high CRT scores (55%), and the overall percentage (68%) is not much better than a coin flip prediction of 50%. From a predictive discriminant analysis viewpoint, the use of combined reading and mathematics criterion referenced scores are not a reliable or accurate indicator of group membership.

High School Dropout Rate

Is it feasible to use high school dropout rates as a predictor of counties that may be grouped into a "have" (low dropout rate) or "have not" (high dropout rate) condition for relationship to human capital investments? The data indicate that there may be potential for examining county high school dropout rates.

The canonical correlation is .68 indicating a possible association between groups and the discriminant function. Also, a Wilk's lambda of .53 is an indicator of the discriminating power between groups. Chi-square ($\chi^2 = 16.78$, $df = 7$, $p = .02$) significantly indicates that there is a difference between distributions for dropout rate of "have" and "have not" counties.

Classification results indicate a higher probability for designating a low dropout rate county (94%) from a high dropout rate location (86%). The overall classification percentage is 91.

These data indicate that high school dropout rate percentages may be a useful tool for investigating human capital investments. For some researchers, high school dropout rate is a crude, imprecise measure which can vary significantly between locations depending upon definition and *who is* or *is not* classified as "dropout." There is a definite need for a more precise definition and measurement of "dropout."

Persons Employed by County

Can employment by county be used as a predictor of "have" and "have not" conditions in a region? Based upon the results of the discriminant analysis, it may be possible to use employment as an indicator of human capital investments in a region. The canonical correlation of .78 implies that there is a possible association between groups and the discriminant function. Also, a Wilk's lambda of .40 is indicative of relatively high discriminating power between groups of high employment and low employment levels. The Chi-square ($\chi^2 = 69.85$, $df = 7$, $p = .001$) was significant. Classification results indicate that a particular case (or county) could be correctly classified nine out of ten times (89%) either a low or high employment rate group.

Employment is an obvious indicator of the overall economic "health" of a region. Additional investigation is warranted to place employment level of a region in proper perspective regarding the overall human capital development impact of providing access to jobs. Myles Horton (1989) commented that actual employment and "hope" for employment are key motivators for adults to invest in themselves and their community rather than participating in illegal or unlawful activities.

Per Capita Income

It is feasible to use per capita income as a predictor of "have" and "have not" conditions in a region. The canonical correlation for per capita income of .80 indicates a reasonably strong association between groups and the discriminant function. A Wilk's lambda of .36 indicates a relatively high discriminating power between the groups of high and low rates of per capita income. The Chi-square ($\chi^2 = 46.91$, $df = 7$, $p = .001$) was significant.

Classification results indicate that it is feasible to predict group membership for individual cases. This discriminant function correctly predicted membership in the low per capita income group with 96% accuracy and membership in the high per capita income group for 83% of the cases. The overall accuracy rate for this function was 89%. Low income per capita criteria were $9,000 or less whereas high

incomes were classified as $12,000 or more.

One of the basic premises of human capital investments (Becker, 1964; Mincer, 1984; Schultz, 1961) is the suggestion that those with higher levels of education and training both as "stock" and "flow" measures will add to the potential for employment. It is also implied that the better educated and trained will also be able to obtain higher rates of pay.

Cost of Education Per Pupil

Public school systems allocate expenses and cost of education (e.g., instructor, curriculum design and transportation) on a pupil basis. Is it feasible to use cost of education per pupil (or investment per pupil) as a predictive tool for human capital investment?

For counties in Georgia, cost of education per pupil is not an accurate predictor of group classification of a county as either a "have" or "have not" county. A canonical correlation of .46 and a Wilk's lambda of .79 are both indicators of relatively poor discrimination between groups even though the Chi-square ($\chi^2 = 17.83$, $df = 7$, $p = .01$) statistic is significant. Classification results are also relatively poor indicating only a three in four chance for correctly predicting membership in the low cost-per-pupil group and a one in three chance for correctly identifying membership in the high cost-per-pupil group. The overall classification accuracy was 72%.

Median Years of Education

Education level of county residents is a "stock" measure (McNamara et al. 1988) for human capital investments. However, is it feasible to use median years of education as a variable to predict membership in "have" or "have not" groups regarding human capital investments?

Result of predictive discriminant analysis indicate that median years of education may have potential for identifying group membership. A canonical correlation of .69 and Wilk's lambda of .52 suggest that there is a possible association between median years of education and the discriminant function containing other outcome variables. Further, the Wilk's lambda of .52 suggests that there is some discriminating power between low and high rates of education. The Chi-square ($\chi^2 = 21.13$, $df = 7$, $p = .004$) was significant.

Classification results indicate that there is a nine out of ten probability of classifying cases into the group with low median years of education and a greater than eight out of ten probability of correctly classifying cases into the high median years of education group. The overall accuracy of the function was 87%.

Median years of education, a "stock" measure, appears to be a potential predictor variable for human capital investments. One of the premises of human capital theory is that as education and training skills are developed, there is a benefit to the individual in terms of increased income and employment options (Schultz, 1961). Median years of education is one indicator of these investments in human capital development.

Summary of Predictive Discrimination

Predictive discriminant analysis is used to examine the question: Can an individual case (e.g., county) be assigned to a particular group (e.g., low or high; "have" or "have not") based upon the discriminating power of the function (in this case the remaining outcome variables)? Abandoning the traditional use of predictive discriminant analysis by examining several scenarios or case examples (see Table 6), it is possible that four variables have potential for discriminating between groups: Dropout rate percentage (DROPOUT); Employment (EMPLOYED); Per Capita Income (INCOME); and Median Years of Education (SCHOOLING). These variables were independent of each other in the individual predictive analyses and examined separately. However, based upon canonical correlations, Wilk's Lambda, Chi-square significance, and classification criteria, they appear to demonstrate potential for associating counties with a particular characteristic of either a high or low grouping which indicates "have" or "have not" conditions.

From a human capital investment perspective, all four of these variables are "stock" measures for individuals. These are variables about individuals within specified counties that

Table 6

Summary of Predictive Analyses

Variable	CE	VE	SCORES	DROP	EMPL	INCOME	COST	SCHOOL
Canonical Corr.	.64	.49	.60	.69	.78	.80	.46	.69
Wilk's Lambda	.60	.76	.65	.52	.40	.37	.79	.52
Chi-square Sign.	.08	.51	.20	.02	.01	.01	.01	.01
Classification %age								
Low Group	82	67	73	94	90	96	78	90
High Group	83	77	55	86	87	83	66	86
Overall	83	71	68	91	89	88	72	87

have already happened or they are the characteristics which the individual brings to a given community. Two of these variables are education related (i.e., median years of education and dropout rate percentage) and the other two are work related (i.e., people employed in the community and per capita income).

Conclusions

Research studies are usually designed to investigate and answer questions. This exploratory study was designed to focus on two questions. One was a descriptive point of view regarding identifying variables related a particular function or construct. The other was a predictive approach concerned with assignment of cases (e.g., counties) to a particular group based upon the discriminating power of selected outcome variables. These two questions were examined but not fully answered.

For the descriptive analysis, it was determined that specific outcome variables could be identified that were related to individual discriminant functions. For these eight scenarios or situations, in each case one or more outcome variables was found to be associated with the discriminant function. Selected scenarios were complicated (i.e., not easily named) when more than one variable was found to be associated with the function.

It seems reasonable to conclude that these data for the 159 counties in Georgia provide encouragement for researchers to examine micro level and secondary sources to apply the Schultz (1961) model of human capital investments. Further, even with limitations about the data (i.e., from secondary sources, not precisely defined or broad measures or indicators of human capital variables), it is also encouraging to identify and confirm the importance of specific variables for studying human capital investments such as adult continuing education.

For selected scenarios or situations, it was possible to predict with some degree of confidence group membership based upon characteristics of being a "have" or "have not" county. No attempt was made to identify by name the have or have not counties. The goal was to test out the model and predictive discriminant analysis techniques for these secondary source data.

During the conduct of this research project, several additional studies were located that raise questions about the impact of human capital investments from many perspectives. These questions are related to the central theme of Schultz's (1961, 1963) views about investing in the skill development of adults as well as other issues not fully developed by Schultz (1961).

Additional questions are raised by other researchers regarding the study of human capital investments. These are listed below with references associated with questions.

1. What are the benefits (impacts, economic advantages) to peer tutoring especially for basic skills and literacy? (Levin, 1989)
2. What are the results of schooling time (e.g., 8 years, 12 years, 16 years) on the learning abilities of individuals? (Hersch, 1985; Rosen, 1977; Marsick, 1988; Mincer, 1979; Bowman, 1988)
3. Regarding wellness and health promotion,

what is the benefit of being healthy to the individual, family, organization (employer), community and society or culture? (Sloan and Gruman, 1988)

4. What are the interaction (benefits/disadvantages) between attitudes toward learning and selected human capital variables? (Flier, 1981)

5. What are indicators of school quality (across cities, counties, parishes, boroughs, states)? (Rosen, 1977)

6. What are the real and perceived incentives for schooling (motivational, financial, leisure, quality of life, etc.)? (Rosen, 1977)

7. What is the sex bias toward human capital investments? (Rosen, 1977). Do women perceive more/less need to invest in adult continuing education, continuing professional education?

8. What are the economic impacts of motivators to learn for youth, adults, older adults? Are they similar, different? (Rosen, 1977)

9. What are the economic impacts if the individual chooses not to use his/her investments (in human capital) or if those investments are used for illegal or other purposes? (Bowles and Gintis, 1975).

10. What are the economic implications of various recruitment strategies for adult continuing education? (Nordhaug, 1987)

11. What are the impacts/influences of policies, financial subsidies, stimulation of selected activities (e.g., literacy education) on individuals and adult education institutions regarding economic and technological development? (Nordhaug, 1987)

12. Is learning in the workplace (e.g., various levels-literacy management or orientation) economically viable for adults? (Marsick, 1988)

13. Are "so-called" intangible factors contributors/inhibitors to individual and/or firm economic development? (Marsick, 1988)

14. What are the impacts of "change associated" (e.g., ambiguity, heterarchy) to the economic development of individuals and/or firms? (Marsick, 1988)

15. Are there different investment strategies when adults learn tasks compared to learning social norms? (Marsick, 1988)

16. Are reflectivity and critical reflectivity contributors or distractors to human capital investments? (Marsick, 1988)

17. Should education be measured in economic terms (benefits/disadvantages) for adults, communities, organizations, societies? (Mincer, 1979)

18. What are the economic impacts of "knowing how" versus "knowing why" versus "knowing what"? (Bowman, 1979)

19. What are the economic impacts on and about the family that influence investments in human capital? (Becker, 1988)

20. Is there a residual advantage/disadvantage to investments in human capital that can be associated with families (Re: class, occupations, generation impacts)? (Becker, 1988)

Recommendations

These data suggest that there may be an association between secondary data sources and human capital investments. Further, questions implied for related references indicates multiple research options for investigating human capital investments.

A series of studies could be designated to investigate individually and collectively the human capital constructs suggested by Schultz (1961). For example, select only on-the-job (OJT) training (see Mincer studies 1970's and 1980's) from a single area (say a county or multiple counties) and assess the impact of OJT on the individual participant, the employing agency and the community or region. Another example would be to investigate the impact of health maintenance, promotion and fitness to the premise that healthier people are more productive (see Sloan and Gruman 1988 and related studies). Additionally, a combination of all five factors of human capital investments (Schultz, 1961) could be designed to assess the impact on the individual and communities using primary sources of data rather than secondary sources. This type of study has not been attempted to date.

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Contrasting Foundations for Learning and Teaching: Selfhood in China and the United States

Daniel D. Pratt

Introduction

Until recently, China was vigorously engaged in academic and economic exchanges with Western nations in pursuit of economic reform. Much of that exchange was in the area of adult education and involved the transfer of andragogical[1] ways of thinking about adult education from the West to China. Yet, China's cultural heritage and her social and political ideology are significantly different from those of most Western nations. How do such differences influence the exchange of knowledge, and how might we view these differences in a way that will improve communication and exchange across cultures? This paper begins with an analysis of the concept of "self" within the two contrasting societies of China and the United States. That is followed by a discussion of implications for cross-cultural exchange with China in adult education, notwithstanding the question of whether such educational exchanges will or should continue after the traumatic events of the Spring of 1989.

The United States is compared with China for two reasons. First, the United States is a dominant force among a group of countries that are culturally and ideologically different from China yet engaged in educational exchanges with China. Second, the U.S. not only sends a considerable number of Americans to China as "foreign experts" but has received more Chinese students and scholars[2] than any other nation over the past decade. As early as 1983, over 100 American colleges and universities had established exchanges with China. By 1988, over 30,000 Chinese students and scholars were living in the United States. By academic year 1988-89, 6,600 new Chinese students had arrived for advanced study in the United States (Stregeigh, 1989). Clearly, the United States has played a significant role in educational exchanges with China during the decade of the eighties and is likely to continue in a dominant role into the next century.

A Model of Self

In all cultures, people come to know their world based upon a particular construction of self. This construction is so integral within the consciousness of the individual as to be indistinct from the person. It is the ground from which all else is viewed and understood but, which itself, goes unseen. Although it goes unseen, it defines who we are and how we relate to the rest of the world. It shapes the ways in which events, relationships, and life in general are interpreted. It is the inseparable soul of our values and our perception.

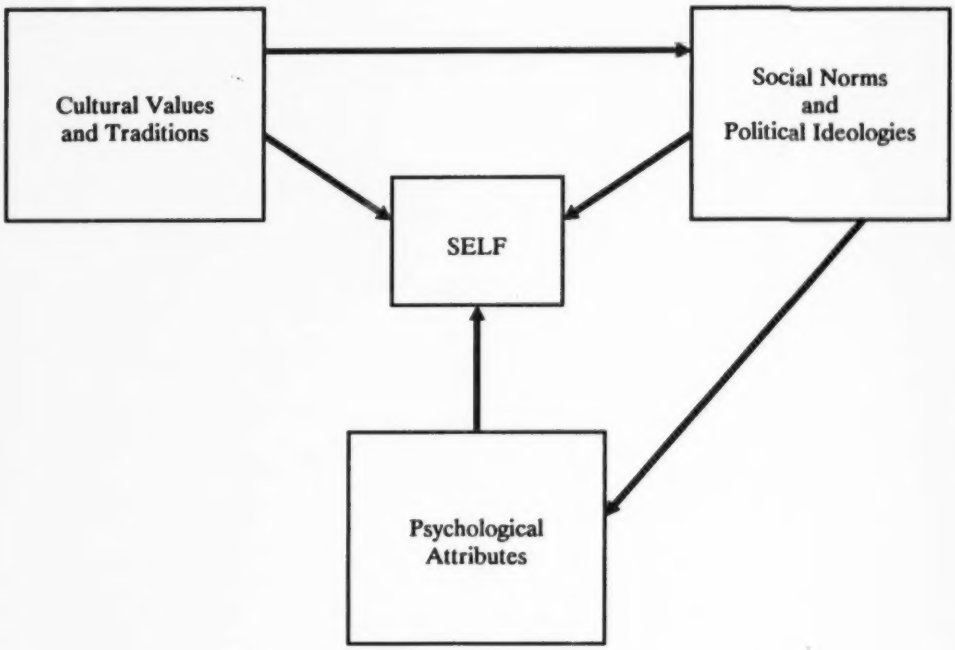
It is not by chance that the ways in which people come to know themselves and define their identity vary across cultures. From a Western point of view, the unobservable center of experience might be composed of a set of beliefs that a person has about oneself, based on a personal history, dispositions, aspirations, and appearance in the eyes of others. In the end, it is a personal construction which individuals use to impose order and meaning upon their thoughts, feelings, and actions (Harre, 1987). However, is this a reasonable explanation from other cultural perspectives? Would it be so from a Chinese point of view?

This section of the paper sets forth a model that considers the interaction of cultural values, social norms, political ideologies, and psychological attributes which affect people's identify and sense of self (Figure 1). The model is presented as a heuristic device to compare and contrast Western, particularly American, and Chinese conceptions of self. It is intended to broaden thinking about and increase acceptance of cultural differences and similarities as they contribute to adult education.

Cultural Traditions and Values

> The experience of selfhood--consciousness--that occurs in human beings in various cultures is not totally derivative of, or reflective of, personality structure, nor is it reducible to

Figure 1
A Model of Self



> an analysis of the social structure in which an individual participates. (DeVos, Marsella, & Hsu, 1985, p.3)

China

Culture is partially at least a system of patterned symbolic interactions which result in values and traditions that are perpetuated from one generation to the next (Hsu, 1985). These values and traditions filter through society to cultural values regarding family and relationships. The traditional Chinese seeks support from family and kin and has an extensive network of relationships which is supported by traditional ideals such as perseverance, obedience, loyalty, harmony, and filial piety.

Some of this, particularly the strong attachment to family and filial piety, can be attributed to Confucian ethics and tradition.[3] Within Confucian thought, the individual is a progressive continuity of a specific ancestry of one's family; thus, the Confucian self is part of an ethnic continuity that envisages the self as the center of relationships and engaged in a dynamic process of becoming or developing.

This development continues through a lifelong process of learning; this is not only through books but through ritual practice. In essence, when seeking self-development, one must act in an exemplary fashion in the role of father (or mother, brother, sister, etc.). The direction of influence is from cultural values, to social roles and normative patterns of interaction, and finally to personality structure. That is, the standard for self-development is not derived from an ideal sense of one's ego but from societal roles and cultural values that are ascribed. Hence, just as age alone is not sufficient for wisdom, filial duty (actions) without filial loyalty (affective commitment) is incomplete and suggests selfish desires. To know what to do in Chinese society assumes an understanding and

acceptance of the correspondence between a rational sense of duty and a moral sense of obligation. This is evident in the exhortation to realize oneself by keeping behavior in accord with the ideals of family lineage and loyalty. All of one's actions are from this perspective an extension of the family and representative of that lineage. It is, then, inconceivable to think of self-development apart from the supportive relationships of family (Tu, 1976).

During the time of the Cultural Revolution, Mao is said to have used the cultural value of loyalty as a means to promote conflict between generations and encourage attacks by workers and students on their superiors and teachers. He may have done this because he considered such unrest to be a prerequisite for change and because he knew that it would be a powerful force for change if he could use the cultural tradition of loyalty toward family and community to engender loyalty to the Communist Party (Yee, 1989). Although the Cultural Revolution is generally considered to be an aberration which slowed down economic and social progress, there is no doubt that he succeeded in generating a strong sense of loyalty and commitment toward the Communist Party.

The United States

If there is a parallel phenomenon that has persisted over centuries and is a defining attribute of American culture, it may be the high regard for personal autonomy and individual rights. This philosophical position stems from Locke's framework of "natural law" and Kant's notion of morality as the universal imperative.

> Locke's starting point is a *prima facie* case against absolute governments and he postulates a minimal role for the State or Commonwealth. For Locke, the State is an institution for the protection of individuals. It is not and does not have, in the Hegelian sense, an entity with a prior existence to which individuals owe an overriding obligation. (Lawson, 1985, p. 221)

What Lawson is pointing out is an historical tradition that assumes the existence of inalienable "rights," possessed by all individuals as a matter of birth, and which are antecedent to the establishment of any social organization. Thus, the furtherance of what is "good" is a personal rather than a collective concern. Within this philosophical tradition even the collective "good" might have to be compromised to protect and preserve the individual rights of autonomy and choice. "The common good cannot be allowed to become the prime concern from which policy is derived" (Lawson, 1985, p. 224). This cultural and historical value is embedded in the Bill of Rights and is manifest in legislation affecting such diverse issues as the choice of whether or not to use seat belts and the right to possess automatic weapons.

Also fundamental to this cultural value is Kant's claim that morality, as the universal imperative, depends upon individuals being autonomous and capable of rational judgment.

> Kant therefore postulates "selves" as centres of consciousness and reason, which are prior to and independent of any interests or attributes which we happen to have an a contingent fact. The individual is conceived as the irreducible "I", who chooses in a way analogous to Descartes' "self" which thinks and has experiences but which is not itself the object of an experience. (Lawson, 1985, p. 224)

From these roots, Jefferson and the other poets of American democracy sought means to protect individual rights from every form of tyranny. The fact that these means are not fully realized in the political and social institutions of American society does not deny the intent nor the substantial differences between Chinese and American philosophical traditions. Both cultures contain values and traditions that have long histories--China substantially longer than the United States--which influence social norms and political policies and inform the construction of selfhood and personal identity.

The Social Context

> An understanding of social life is not to be derived from knowledge of psychological principles. Rather, what are taken to be psychological principles are derivative from the ongoing process of negotiation and conflict among persons. Thus, understanding community is prior to and establishes the grounds from which psychological constructs are achieved. (Gergen, 1987, p. 61)

The self also exists within a social context and takes on normative roles and patterns of interaction that reflect and influence relations and place within society. One important and pervasive aspect of this is what Hsu (1985) calls role relationships. These function within one's "operative society" and consist of people, ideas, and things which an individual finds useful. While they may include some exchange of personal regard or affect, intimacy and emotional exchange are minimal and of lesser importance in the understanding and definition of these relational boundaries. In fact, the cultural and societal norms which define such role-relations normally negate emotional attachment between individuals. Examples of relationships of this sort include teachers and students, merchants and customers, employers and employees, and rulers and subjects. Rules that guide communication between people include those such as traffic rules, taking tests and examinations, courtesy customs, patterns of greeting and parting, and ways of buying and selling. According to Hsu (1985),

> We perform our roles in association with them, or act according to them, or use them, but are not greatly disturbed, or disturbed at all, by changes in them. In the normal course of events, the individual is less likely to resist changes [in these relationships]. (p. 31)

An interesting comparison between Chinese and American societies in this regard concerns extended family members. As Hsu points out, American grandfathers are more likely to be a part of the "operative society and culture" while God is likely to be perceived as part of a closer, "intimate society and culture." Whereas in China, these would be reversed with greater attachment to one's grandfather than one's god.

> Hence death of one's grandfather is a more significant event for the Chinese individual than for his American counterpart, while differences in church affiliation may be an American barrier to marriage but are of no consequence at all in Chinese romances. (p. 31)

This reversal of the role of intimacy and effective regard in American and Chinese society is important to the understanding of the traditional supremacy of kinship in Chinese society. Identity and self-esteem are permanently tied to the Chinese family--parents, siblings, and extended family members. This is not to imply that the same kind of identity and kinship does not or cannot exist in American families. Americans also begin life with an extended family constellation. However, since the dominant future depend upon how well people can stand on their own two feet, extended family, siblings, and even parents are increasingly moved toward the periphery of intimacy. The relationship with family members is very much a voluntary one and is subject to the vicissitudes of a mobile society that relies on government and institutions for the provision of welfare, health, and eventual care during the later years of life.

As a result, Americans are often encouraged to develop a sense of personal autonomy and self-sufficiency which can have an unintended affect of distancing them from their original family ties. This in turn results in a search for other forms of intimacy and emotional attachment as replacement for the family.[4] Ironically, the search often engenders feelings of isolation and loneliness rather than fulfillment.

In China, since affective regard and reciprocal intimacy is continuously and readily available within the kinship network, individuals satisfy their psychosocial balance and need for affection with less resorting to relationships outside of family. Consequently, a Chinese man or woman tends to relate to the "operative society and culture" in relatively impersonal terms.

> He can afford not to be curious or anxious about them; he is unlikely to have the urge to improve or help them; he can even afford to ignore them completely unless they threaten him physically. He can meet them or he can leave them. Hence the Chinese, throughout all of their history, have developed few secondary groups outside of their kinship boundary. (Hsu, 1985, p. 31)

This may be a contributing factor to the common complaint voiced by Westerners with regard to the apparent attitude of indifference from service personnel in restaurants, hotels, train stations, and airports within China. More will be said about this in discussing personality and psychological attributes.

Another factor contributing to the socially

constructed sense of self is one's "location" in societal structures. In this case, location refers to the individual's level of education, position within a work unit, neighborhood organizations, the Communist Party, and so on. Location determines one's social identity. In this regard, Stone (1962) draws a distinction between "self" and "identity."

> Identity establishes *what* and *where* the person is in social terms. It is not a substitute word for "self." Instead, when one has identity, he is situated--that is, cast in the shape of a social object by the acknowledgement of his participation or membership in social relations. One's identity is established when others *place* him as a social object by assigning him the same words of identity that he appropriates for himself or announces. It is in the coincidence of placement and announcements that identity becomes a meaning of the self. (p.93)

For example, it is common for Chinese to identify themselves as being from a particular company, institution, or governmental agency (their work unit), with a given title and set of responsibilities, and within a specific city and hierarchy of governance that clearly delineate authority and responsibility. This is most noticeable in the ever-present exchange of business cards and the protocol of who speaks and who remains silent in meetings. Thus, identity is often derived from one's place within the operative society, which in the case of China is extremely hierarchical, and for most individuals it means being located at the bottom of a virtual tower of bureaucracy.

The Political Context

Contributing to this picture is the dominant political ideology within society and the prevailing conception of rights and authority. In China, the Communist Party of today as with previous ruling regimes treats superior-inferior relationships (maintained through hierarchical authority) and obedience and order (maintained through power and control) as first principles, above morality and individual or human rights. This is clearly visible in the repression of and retribution against the pro-democracy movement of 1989. Writing before those events, Edwards (1986) described the inherent conformity and unity of Chinese society which is sustained by a strong authoritarian ideology.

> Most Chinese view society as an organic whole or seamless web. Strands in a web must all be of a certain length, diameter, and consistency, and must all be fitted together in accordance with a preordained pattern. Nonstandard strands, or randomly stitched treads, detract from the symmetry and strength of the web and diminish its capacity to perform its function. Likewise, in both Confucian ethic and current Communist morality, the individual should conform to a standard model of behavior, characterized by an overriding concern for the interests of society and readiness to perform the role assigned by the Party and responsible state organs. (p. 44)

All of this is in service of the ruling dogma--harmony and stability--and continues to be dominant theme in China's political and economic policies.

This is readily apparent in China's recent constitutional history. Since 1908 and across four very different regimes--the last Imperial Dynasty, the Liberal Republic, the authoritarian Guomindang government, and the socialist People's Republic--Chinese constitutions have been remarkably consistent in their approach to human rights. All of the 11 or so drafts of constitutions have listed rights and freedoms which were set out as goals to be attained by the government and, consequently, granted to the people. For example, chapter two of the most recent constitution lists several, including freedom of speech, press, assembly, association, and demonstration. However, as with previous aspects of China's constitutional documents, there are three aspects of China's constitutional history that consistently and rather frighteningly explain recent events and clarify the relationship between the individual and the political structure of China (Edwards, Henkin, & Nathan, 1986).

First, none of the constitutional drafts since 1908 have presented human rights as inalienable. In China rights are derived from citizenship and not by virtue of birth, and they are granted by the government. Thus, because all rights are derived from society, there can be

no such thing as individuals claiming rights against society. Rights are presented as privileges which can be granted or withheld by the state, depending upon political or economic conditions. The basic rule is that the state can limit rights for any purpose as long as it does so by law.

This was at the core of much of the demonstrating in the Spring of 1989 and, of course, culminated in the slamming of the door on human rights and freedom of expression. Yet, while outraged by unjust acts of the government, the public response was often one of patient submission to authority and a bitter fate. Under these circumstances patience is understandably construed as a necessary virtue.

Second, the primary goal of each constitution has been to strengthen the state and promote socialism. This is significant in that it clearly and unequivocally puts Chinese socialism and the collective before the individual. Human rights are not ultimate values or ends in and of themselves; they are simply instrumental and programmatic means to be used in pursuit of stability and harmony, which is always within the existing political system. Therefore, expressions of individuality, including human rights and democratic reform, are not only perceived as less important but as obstacles to stability and to the welfare of the collective.

Third, in each of the constitutions, including the current document of 1982, the political body that drafted the constitution has the authority to decide when and if rights should be granted. Thus, if there should be an appeal against the retraction of individual human rights as in the case of several demonstrators given the death penalty, the only avenue of appeal for the Chinese is to the very body that found them guilty of counterrevoluationary activities. There is no system of checks or balances, nor is there an apolitical judiciary. In effect, the constitution is whatever the ruling political leaders say it is; rights and privileges are circumstantial and subject to whomever is in charge.

In China, rights are bestowed upon people by society in accordance with their fulfillment of societal duties. Rights, therefore, have a social rather than natural origin, and the state has the right to dominate and control the civil society, i.e., the domain of private interests. Indeed, it is the responsibility of the state to suppress private interests.

Collectively, the emphasis within China upon superior-inferior relations, obedience and order, and the maintenance of stability at the expense of individual rights are indications of a good deal of external control and sanction that affect people's identify. Indeed, within this system, many of life's most important decisions relating to education, marriage, living quarters, employment, location of spouse, number of children, and permission to travel outside of China are controlled by others. People are more or less at the service of the state, without individual rights or the capacity for independent or self-serving action.

Aspects of identity that are associated with social and political structures may shift back and forth in response to dramatic social change. However, this may be an adaptation to rapidly changing or traumatic social events that threaten previous definitions of self. In a longitudinal study of Chinese scholars and students studying in Canada for 1 year and then returning to China, I have been intrigued by their apparent swings in conceptions of self in relation to society. Upon arriving in Canada, they voice conceptions that are understandably in line with the political and social context of Beijing--a diminished importance of individual rights and personal autonomy and a heightened sense of service to society and the collective well-being. After a year traveling and studying in Canada and just before returning to China, their conceptions are more focused on individual rights and opportunities for advancement and self-development. Yet, after they have been back in China for a year, their conceptions sound much like the original ones with an emphasis on the collective and a suppression of their individuality. Turner (1987) interprets such adaptations as altered conceptions of reality that respond to changes in opportunity and reward structures. Given this social and political context of contemporary China, this certainly seems plausible.

While these aspects of self and identity are less stable that those mentioned with regard to culture and heritage, they have considerable im-

plications for one's sense of loyalty and commitment. For example, most Chinese have learned to put their loyalty and trust into kinship relations and not into the bureaucracy or the ruling party. This parallels a pride in heritage and culture with ambivalent or even negative feelings toward the nation-state of China.

> This unique characteristic, that the Chinese hold ambivalent, equivocal, largely negative attitudes toward China as a nation-state, is reflective of their history. For while on one had there is the land's great civilization stretching unbroken across thousands of years with innumerable rich treasures, innovations and cultural achievements, there is on the other hand a contrasting broken line of political rule and governance over its people that has been mostly despotic, disjointed and alien. When Chinese say that they are Chinese, unless they are somehow connected with the government, there is little or no implication that they associate themselves with the government or nation-state. To speak of China as a whole, they refer abstractly to "the Chinese people," the "motherland." (Yeel, 1989, p. 98-99)

Thus, it may be a cultural reference more than national that substantively and consistently informs the Chinese sense of self and identity across time and circumstance. Across wild gyrations in political ideology, Chinese have maintained their primary sense of identity as "Chinese." Even second generation expatriate Chinese still identify themselves as "Chinese." If there is a particularly stable aspect of self within Chinese society that persists across time and circumstances, it seems to be derivative of culture and tradition more than social and political factors. This may be so even though normative patterns of socialization and political relationships of power undeniably locate individuals within society and expert undeniable influence on their construction of self and identity. Obviously, this is as true in the United States as it is in China.

Psychological Attributes: American Conceptions

> Whatever ties of love or loyalty may bind us to other people, we are aware that there is an inner being of our own; that we are individuals. To the Western reader it may come as a surprise that there is any thing unusual in this experience. It is to us a matter of common sense that we stand apart from the natural order in which we are set, subjects over against its objectivity, that we have our own distinct personality, beliefs, and attitude to life...Western culture, and the Western type of education, has developed this sense of individuality to an extent exceptional among the civilizations of the world. (Morris, 1972, p. 1)

The third sphere of influence is focused on the individual's personality and need dispositions and on the recognition of varying degrees of individuality with respect to cultural values and societal structures. It is still acknowledged that conceptions of self and orientations toward the individual within society flow from cultural values and historical tradition through societal norms. However, the focus of one's identity and sense of self now turns to a personal set of psychological attributes that distinguish the individual and set one apart from others. For the United States, differences are now given as much import as commonalties; for China, individual differences may exist, but they are only an impediment to social and political goals.

Within the United States, there is a tradition of liberal, democratic individualism that presumes people's dominant traits and the essence of their being to be genetically and socially constituted and deserving of protection from external manipulation. Two beliefs lie at the core of this tradition. First, human rights are believed to be inalienable. Second, each person is believed to be unique. Each of these is important in distinguishing between American and Chinese conceptions of self.

Individual Rights

The American commitment to liberal democracy espouses several rights such as the right to express opinions and beliefs, to maintain control over one's destiny, to protection of privacy, and to preserve one's dignity. None of these rights has to be earned nor can they be denied except for infringement on the rights of others. They are assumed to be antecedent to membership in society.

An important corollary of this belief in in-

alienable rights is the assumption that a plurality of beliefs helps generate truth and thereby promotes not only liberty but progress. Therefore, it is the role of government to see that the exercise of individual human rights is not infringed on by society. In other words, there is an emphasis on a special relationship between the individual and society based on a belief in "God-given" or "naturally endowed" rights and the desirability of nurturing self-reliance, autonomy, and independence. Within this relationship the individual is highly valued and takes precedence over society.

Individual Uniqueness

Central to this conception is the second belief--that each person is unique and that it is supremely important not to impose uniformity on natural diversity. It is a celebration of individual differences which manifests itself educationally in a commitment to individual differences, e.g., individualized instruction, learning and cognitive styles, intellectual and moral development, needs assessment, and motivational orientations. There are, literally, hundreds of instruments which are used to measure such dimensions of individuality as well as a host of other psychological aspects of self (e.g., Mangen & Peterson, 1982; Wylie, 1974). The nature of this literature attests to a deep and profound appreciation of the psychological uniqueness of each individual. It is these distinguishing and unique attributes of the person that are used to answer the question of how we can be creatures of society without being "mere castings from the moulds supplied by social structure" (Turner, 1987, p. 120).

Along side the belief in diversity and uniqueness of each person is a belief that psychological aspects of the person can be divided into social and private realms and that society should have no control over the latter. As a result, individuals are believed capable of standing apart from society in the privacy of their inner self to reflect on their beliefs and actions, to critically evaluate them, and to make choices based on that review. This individual autonomy is assumed to exist both as a capacity of the person to be nurtured and as a societal ideal to be promoted.

Additionally, the interior aspects of the person--thoughts, beliefs, and feelings--are considered vital when attempting to understand yourself or someone else. The self is in part assumed to be emotionally constructed through an affirmation of worth in relation to others. The world is seen from the point of view of the private realm of one's personality. From such a perspective the world makes sense and is acted upon in terms of its effect upon the individual. There is a tendency to understand the social order and social significance of everyday events in terms of how they effect the individual. Such a construction of self is primarily egocentric, i.e., takes the individual as the starting point in construing the social order (Abercombie, Hill, & Turner, 1986; Cole, Gay, Glick, & Sharp, 1971; Hsu, 1981; Macpherson, 1962).

As a result, there is a constant need for affirmation or validation of self-worth usually from "significant others." This is not unusual. However, in the United States, the process has been extended to even the most casual of relationships and contacts. Americans (and Canadians to a large extent) seem to expect that each time they interact with someone it should in some form validate the fact that they are worthy and important. This can be seen in restaurants, banks, grocery stores, and airlines when service personnel greet customers with a tone and look that suggests it is their pleasure to serve them even though the warmth and welcoming voice switches with great speed and ease to the next person in line as one moves onward. Americans have come to expect that even service personnel should convey a message of appreciation and valuing with their eyes, posture, gestures, words, and tone of voice. Whether they actually value them or not is insignificant; what matters is that they convey the impression that they do and that this person is important to them and to their work. This instrumental affection and emotional valuing is closely connected to a sense of self that is highly dependent upon affective validation from both "intimate" and "operative" parts of society.

Psychological Attributes: Chinese Conceptions

In China the situation and history are quite different. Notions of human rights and in-

dividuality are constructed from a different perspective--one that is more sociocentric than egocentric.

Individual Rights

As mentioned earlier, in traditional China there was no concept of natural or God-given rights. In place of the idea of natural rights was the belief that rights were derived from society and hence were subordinate to social interests. While traditional Chinese philosophies had definite ideas about individual equality, rights, and freedom, they were subordinate to ideas of duty, ethical conduct, public benefit, and social responsibility--all in pursuit of social harmony and stability. (Zhang, 1988)

Today, Chinese society recognizes the individual primarily as a member of the whole, placing greater emphasis on duty than on individual rights. In Confucian terms, one must first perform one's duties rather than claim one's rights (Yang, 1986). Rights were bestowed upon people by government in accordance with their fulfillment of societal duties. Rights, therefore, have a social rather than natural origin.

Individual Uniqueness

In terms of uniqueness, the traditional Confucian position emphasized the existence of innate human attributes that could not be altered and which therefore set limits on the possibilities for social intervention in the development of the person. However, contemporary Chinese views start with the assumption that human nature (personality) can take infinite forms but should be transformed to fit with the prevailing social and political goals and policies. This position rests upon several central beliefs about people's social nature or personality (Munro, 1977):

1. Each person's personality is assumed to be thoroughly malleable. In this regard the Chinese are speaking of "perfectibility." No human is assumed to be restricted by innate qualities or attributes from achieving the desired state of being. Consequently it is the responsibility of the State, and therefore educational institutions, to transform people's personality toward forms of thinking, believing, and feeling that are deemed best for society. Therefore Chinese educational theories and practice are for the most part not concerned with individual differences; educational procedures are more important than psychological differences in the transformation of personalities.
2. Personality development (transformation) is achieved through a correspondence between three forms of knowledge: (a) Perceptual knowledge--being able to identify and name things, based largely on empirical observation; (b) Rational knowledge--recognition of the essence and laws of something. Through rational knowledge a person learns basic principles and truths. On the basis of these primary truths and principles the person is given a standard for learning perceptual knowledge; and (c) Moral knowledge--awareness of the relationship between rational knowledge, one's work and role, and the guiding principles, values, and virtues of State policy. Specialized knowledge not guided by proper moral principles is considered dangerous.
3. All feelings are assumed to have a social origin, i.e., to be derived from a person's group affiliations and social class. This means that any specific motive, goal, thought, or belief must be understood as derivation of one's class consciousness. Thus, even the phenomenon of the same stimuli (e.g., colors) eliciting different reactions in different people is explained as a function of the social class to which they belong. Other feelings are regarded as unimportant except within intimate relationships.
4. There is no such thing as "pure feelings." Feelings are, for the most part, vehicles for evaluation where the individual is to make a judgment of approval/disapproval or proper/improper. The only feelings that are regarded as worthy of attention are those that carry some evaluation or are associated with duty and are themselves subject to praise or blame. Absence of proper feelings while performing one's duties suggests the presence of selfish desires and there is no place for self-serving thoughts, feelings, or beliefs. Feelings of duty and obligation project the person beyond the "private self" and help to solidify

the individual's place in a larger network of relations.

5. A precondition of personality transformation is honing the mind's capacity for self-criticism. In its most extreme form it is called *jao dai*--the confession of all wrong doing as a form of penance. Usually, it is simply a matter of comparing one's accomplishments, thoughts, feelings, and beliefs to some external standard, which is often in the form of a "model" worker or unit identified by the government.

In combination, these beliefs allow for the co-existence of both prior assumptions, i.e., that human nature can take infinite forms, but it is possible to shape anyone's personality to conform to certain social or political values.

As a result, Chinese tend to take a different view of the interior aspects of people, e.g., personal emotions and the extent to which they are a significant part of the self. The Chinese cultural rationale assumes the continuity of the social order to exist independent of personal, inner feelings. Chinese make sense of themselves in terms of their society and the role(s) they are given within that society. What is uniquely characteristic of the individual's private experience, particularly individual emotions, is defined as lacking in social significance.

> Since emotional expressiveness is not required to affirm an encounter, the Chinese are not required by convention to provide their interlocutors with a continuing symbolic pattern of emotionally expressive response; the absence of this pattern leaves those who expect it at a loss, and it is probably the basis for the old stereotype that the Chinese are inscrutable. (Potter, 1988, pp. 193-194)

If such emotions are defined as irrelevant idiosyncrasies of no intrinsic importance to the social order and if the social order is supremely important in comparison to the individual, then it follows that emotions are also of little significance in the construction of a concept of self within Chinese society. Such a conception is significantly different from one that defines emotions as a fundamental aspect of the self and a means for providing continuous validation between the individual and society.

It is not that the Chinese are devoid of emotions or incapable of being scrutinized or searched through interpersonal means but rather that they do not telegraph emotions like people from the United States. Nor do they see the need to validate another's self-worth through an exchange of emotional signals. Indeed, if emotions are not seen as a significant part of the self, why would one send out emotional or affective messages to casual acquaintances? This should not be misconstrued as an unwillingness to disclose emotions; that would be to come full cycle and interpret their behavior from a Western perspective. Instead, it seems more within the present interpretation to assume that psychologically unique aspects of an individual such as emotions are relatively unimportant in terms of one's view of self and identity.

It would seem, therefore, that whereas the West has a deep and profound appreciation of the psychological uniqueness of each individual, Chinese society seems to mitigate against such a view. As a result, less importance is placed on a psychological construction of self and concomitantly on individual differences.

This may have been a contributing factor to some difficulties I experienced while conducting research in China during 1988-89. In interviews with 40 adult educators from across China, none of whom had been outside of China, two questions were consistently difficult to translate. The first had to do with "self-concept" and the second with "individual differences." Even though we used Xu's *English-Chinese Dictionary of Adult Education* (1988) and engaged in a thorough process of repeated translations and testing of meaning before the interviews, there remained some confusion as to what these terms meant. Ultimately, with the assistance of Chinese scholars from Beijing University and the Chinese Academy of Social Sciences, it became clear that the phrasing of these questions placed undo emphasis on unique aspects of the individual and implied a particular construction of self and individuality that was at odds with Chinese conceptions.

Summary Comments on the Model

The model presented thus far suggests three spheres of influence which differentially affect conceptions of self and identity within and

across cultures.[5] The Chinese construction of self and location of personal identity appears to be derived primarily from cultural, social, and political spheres of influence with an emphasis on continuity of family, societal roles, the supremacy of hierarchical relationships, compliance with authority, and the maintenance of stability. The resulting self finds an identity which is externally ascribed, subordinated to the collective, seeks fulfillment through the performance of duty, and would have little meaningful existence apart from ordained roles and patterns of affiliation. If this is true, the Chinese self is largely an externally ascribed, highly malleable, and socially constructed entity--a part of an intricate composite which like a hologram is representative of the whole even when removed from it. Thus, when the Chinese bring shame upon themselves, it may be shaming all those with whom they are affiliated and from whom they derive their identity both past and present.

In contrast, the American construction of self and location of personal identity have traditionally originated from the same spheres of influence but with significantly different philosophical values. Starting with a belief that what is "good" is of a personal nature, the American tradition has professed the *a priori* existence of individual rights. These rights are assumed to be of natural rather than social origin and therefore do not have to be earned; they are inalienable. This philosophical and political commitment has lead to a pursuit of autonomy and independence as manifestations of self-development and a conception of self that is subject to revision as one is recognized as the starting point for construing the social order and the self is considered a psychological construct as much as an artifact of cultural, social, and political influences. As a result, there is an impassioned commitment to the uniqueness of each person and a high regard for individual differences. This is evident in forms of adult education that predominate within the U.S. as well.

Implications for Adult Education

American Adult Education

Within the United States a particularly influential and common conception of adult education is that of "andragogy" as articulated by Malcolm Knowles (1980, 1984). This particular view of adult education espouses at least implicitly a set of beliefs about the nature of adults as learners, motives for learning, appropriate types of relationship between teachers and learners, and the nature and role of self-concept within the educational process. Its proclaimed goals are the "democratization" of education and the empowerment of the individual. Its methods of collaboration and choice are coupled with a profound appreciation of individual differences. This is embedded within a cultural commitment to individual autonomy and the right to choose as central values to be protected and promoted. Thus, it is no accident that such a conception of adult education as a set of beliefs and a way of practice has taken root and flourished in the soil of Jeffersonian Democracy. The strident individualism of the United States with its constitutional proclamation of individual rights has indeed been fertile ground for such growth. As such, it is fundamentally an ideology of the individual and is anchored in existentialist philosophy and humanistic psychology.

However, within existentialist philosophy and much of humanistic psychology the individual must undertake to "find" itself or to "make" one in the here-and-now of existence with no major reliance upon others either present or from the past. Thus, we find individuals in Western societies going to some lengths to find the "real inner self" and to "get in touch" with an "authentic" self that is simply assumed to exist with its essence existentially there, waiting or needing to be discovered.

The self is perceived as subject, the center of existence and meaning and, therefore, is searched for apart from the relationships that may have initially given it meaning, and with extended family moved to the periphery in search of self. Such a perspective on self not only obscures the influence of historical, cultural, social, and political factors but stands in sharp contrast to Chinese traditions and conceptions of self, particularly those that still hold to Confucian notions of self as the center of relationships and with the individual perceived as object more than subject, created more than existing,

and in relation with, rather than apart from, others. Thus, there may be a fundamental contradiction between a central principle of American andragogy and Chinese conceptions of self which has important implications when considering cross- cultural exchanges.

Chinese Adult Education

One important question that arises from this comparison is whether or not andragogical beliefs and practices are suitable to adult education in China. Most anyone that has taught in China will have experienced situations that raise this question. For example, attempting to get adult students to express their opinions and feelings, choose among learning assignments, participate in self-evaluation, or challenge the stated position of those in authority, e.g., the instructor's opinion, usually meets with some resistance. Most Chinese students are reluctant to do these things and are so for good reason. Their opinions and feelings are not important in other realms; why should they be here? They work primarily toward external exams and to standards that are set by others, so why should they engage in setting criteria and standards for their evaluation? Further, the opinion of an instructor may be in error, but it is not the place of a student to say that in public. These are self-evident to anyone who has worked in China. However, what lies beneath these patterns is far more than simple reticence or courtesy. These behaviors are deeply rooted in a culture and society that is profoundly different than those that expect students to be outspoken and autonomous.

Conceptions of Teaching

This is also apparent in comparing American and Chinese conceptions of teaching. American notions of andragogy portray the teacher as a "facilitator," sharing control and authority over valued instruction functions. This is a direct extension of the values and philosophy that undergird the defining attributes of self and identity in American culture, i.e., a belief in autonomy and the existential self. Thus, appropriate relationships between learner and teacher are determined by what will promote learner autonomy and independence (e.g., Pratt, 1988).

Adult educators in China have quite different conceptions of teachers and the relationship between teacher and learner. The most prevalent conceptions of teaching as expressed in interviews with adult educators across China depict teachers as transmitters of knowledge, role models, and the center piece of the educational process.

Teacher as Transmitter of Knowledge

In China, teachers are assumed to be expert in a content area. That is, they are assumed to be well grounded and experienced in the knowledge and skill to be taught. In discussing such concepts as *teaching, learning, self-concept, motivation*, and *individual differences*, Chinese adult educators talked mostly about their responsibility to convey (a) a body of knowledge or expertise and (b) a proper attitude toward that knowledge and its role in Chinese society, i.e., the relationship between work and social or political goals. Very little concern was expressed about individual differences or student motivation. It was important that learners "try their best," but if they did not learn, it was interpreted as a problem of student motivation or ability, not as a matter of individual aptitude, and certainly not as the fault of the teacher. This is similar to a "Stage One" conception of teacher competence (Pratt, 1989) that is teacher-centered and rests on the two fundamental beliefs and assumptions that (a) there exist general laws or principles of teaching and learning which apply across subjects, learners, and circumstances and (b) there is a direct and significant relationship between effective teaching (i.e., the mastery of basic teaching skills and procedures) and student learning, usually measured by performance on external examinations. This stands in contrast to the most common conception of teaching in American adult education where there is an emphasis on the relative nature of knowledge, there is a need to be adaptive and accommodating to learners and context, and the learner is at the center of the educational process (Heldman, 1990).

Within China, this means the teacher is more concerned with the efficient delivery of in-

formation than with individual needs. The learner is perceived as part of a collective, and the collective rather than the individual is the focal point. Furthermore, if uniqueness and individuality are relatively unimportant, individual interpretations of content are also relatively unimportant. What is important is that the learner master the content through diligence and patience without questioning or challenging what is presented. Indeed, questioning by students is quite often seen to be disruptive to the process and not respecting of the teacher. This entire set of conceptions is fueled and supported by an elaborate system of external examinations and a construction of identity and self that reward conformity and compliance more than ingenuity and confrontation.

Teacher as Role Model

Historically, role models in China have been exemplars of virtues or attitudes that the masses are to learn. Such models are usually deceased, e.g., Confucius, Norman Bethune, and Mao Tse-Tung. However, the government goes to some lengths to identify individuals, work units, and even entire institutions that are exemplars of technical skill, production, or innovation. These individuals are given public recognition for their achievements and for demonstrating support for official Party policy or social goals. To be declared a model it is essential that individuals show they understand how social goals or Party policies are furthered through their performance of duty. It is the realization of the values and policies and not of the work per se that is most important. Respect or status is not accorded solely for productivity or technical skill; people must also exhibit a proper social nature of personality (Munro, 1977).

Theoretically, model individuals (or units) are to be exemplars of independent judgment, flexibility, or adaptation. However, China's political ideology and social structures perpetuate the normative values and authoritarian tendencies of the Party. Under such strictures, models should not and do not exercise independent judgment on matters relating to Party policy.

As a result, when Chinese adult educators refer to themselves and others as having a responsibility to model or exemplify certain standards of performance and belief, they are referring to a long standing tradition that places teachers in positions of moral responsibility. Molding the social nature of their students is as important as developing areas of knowledge or skilled performance. Under current conditions this raises some dissonance as many educators joined their students in the Pro-democracy Movement of 1989 but now must restrain themselves from expressing any thoughts and values that run counter to the current government's policies and edicts.

Conceptions of Learning

There is also within China a stress on what Norman (1982) calls additive and fine-tuning learning. Additive learning is the acquisition and assimilation of new knowledge or skill that complements what is already known. There is no contradiction or challenge to existing knowledge or belief structures. Fine-tuning is simply the improvement of one's existing knowledge or ability, e.g., doing it faster, smoother, or with greater proficiency. This along with the recognition that language plays an important part may give some explanation to the concentration (and excellent performance) of overseas Chinese graduate students in certain subjects.

> The excellence of Chinese graduate students in physics, for example, has led American professors to rely on them as teaching and research assistants and American students to complain that they are distorting the grade curve. University departments such as physics, chemistry, computer science, and engineering now rely increasingly on Chinese talent. (Strebeigh, 1989, p. 74)

Math, physics, chemistry, computer programming, engineering, and technical aspects of musicianship are all forms of either "additive" learning or "fine-tuning." Such types of learning are entirely congruent with both the prevailing political system and cultural traditions of Confucius (Tu, 1985).

Yet, when asked to critically examine their beliefs or the foundation for their beliefs, Chinese students seem to have a great deal more difficulty. This form of learning, which calls into question one's core values, is not dominant

within their cultural heritage and may at the moment even be life-threatening. Furthermore, to ask them to be self-reflective and question the foundations of their beliefs is to place them as subject rather than object and have them critically question the values of those from whom they derive their identity.

Concluding Thoughts

Many Chinese students and scholars are once again questioning the current political system with its policies of repression, containment, and punitive measures. In questioning these things, they are not necessarily speaking against the most enduring values and beliefs of their culture and society. Yet, they are faced with the dilemma of abandoning family, work units, and the "Motherland" of China for a life elsewhere. This decision is not made without a great deal of anguish and sorrow, especially after June 4, 1989. Yet, even in this moment of tragedy they are expressing a oneness with Chinese society while rejecting the government of Li Peng and Deng Xiao Ping that so devastated the hopes and aspirations of a new generation. This sense of identification with something called "Chinese" is an emphasis on culture rather than nationhood and is a source of pride and agency that affects them deeply. Their identity is achingly entwined with the very society they now consider leaving.

What we assimilate and construct as characteristics of self or as conceptions of adult education are primarily products of some relational configuration which includes cultural, social, political, and psychological factors. However, the ways in which we acknowledge those factors and the importance attributed to them in understanding self and its implications for adult education differ significantly from American to Chinese cultures. The United States places great emphasis on the individual and personal attributes which constitute conceptions of self while only marginally acknowledging the ground upon which those attributes rest and the context from when they emerged. It is as if they are talking about pawns, rooks, and bishops but have not recognized those to be pieces within the game of chess (Gergen, 1987).

Finally, adult education within any country is not simply a neutral body of knowledge and procedures. It is as much political as it is educational practices and materials. As Hayhoe (1987) suggests, the transfer of knowledge may be for a variety of stated purposes, but it always carries with it cultural aspects which should be made known.

> The transfer of knowledge intended to strengthen purposive-instrumental rationality might be balanced by policies that make visible the cultural, social and philosophical underpinnings of [educational] technique in each nation. (p. 280)

To lose sight of this is to not only misunderstand one particular form of andragogy but to endanger cross-cultural exchanges. This can be no more poignant than now when China is in turmoil and its people in jeopardy for the very kind of thinking that is promoted within American andragogical approaches to adult education.

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Notes

1. For readers not familiar with the term "andragogy," it is to adult education what "pedagogy" is to youth education. In the United States, it has particular connotations which will be clarified later in this paper.
2. The usual distinction between students and scholars from China is based on enrollment in degree programs. Students are enrolled; scholars are not.
3. I recognize the need to be cautious in linking Confucian ideas to contemporary behavior. It is a question, rather than a given, as to whether or not today's Chinese are informed of, and influenced by, Confucian thought. However, my point is that Confucian values and ideas, especially those related to family and filial piety, still have an affect upon Chinese society and individual behavior.
4. Feminist literature is beginning to awaken American society to an alternate locus and form of identity

i.e., women's identity, which is grounded in an ethic of caring and a fidelity to relationships. While it may seem, at first glance, that this is similar to much of the Confucian ethic that elevates family relations it must be remembered that the Confucian sense of family loyalty and filial piety is exclusive to family and is very paternalistic. Further, the patriarchal family of China entered into much abuse towards female members, which most mothers and other females condoned and often took the lead to enforce. These practices included footbinding, *mui tsai* slave girls, brought from poor families for sex and household duties, indifference toward the education of females, and even female infanticide.

5. Of course, it can be argued that within the U.S. and China there are significant subcultures which are markedly different from the dominant cultures. Indeed, these same spheres of influence may be seen to influence conceptions of self and identity within those subcultures. It is more a matter of where we draw the boundaries of each sphere, and the relative size or influence of each sphere, as to the nature of those influences and the resulting conception of self. However, there are still significant influences that bear upon the self that might reasonably be located within the dominant culture spheres mentioned above.

Educational Barriers to Rural Adults

Stanley E. Easton

Background of the Study

Participants at the National Invitational Meeting on Rural Postsecondary Education held in 1981 focused on the varied needs of their students and called for individual attention to their unique situations (*Rural Postsecondary*, 1981, unpaginated). Despite their individuality, however, rural citizens were seen as sharing the common difficulty of securing access to postsecondary education programs suited to their needs. As recently as 1985, Barker found information on adult education programs for rural Americans to be "both incomplete and inadequate" (p. 4).

Rural adults are "participating in educational programs at rates that are increasing faster than they are for their urban counterparts" (McCannon, 1983, p. 15). Data from the National Center for Educational Statistics (Kay, 1982) indicates that 27.6% of participants in adult education in 1981 were residents of rural communities. The rural populations of the United States increased by 13% between 1975 and 1981, but participation in adult education by rural residents increased by over 34% during the same period while participation by urban residents increased by only 21% (p. 15).

Significant barriers prevent more adults from attending educational programs (McCannon, 1983).

> There seems to be a general consensus among studies cited here that rural adult learners do experience significant barriers. The foremost barriers are distance and lack of prior educational attainment and available counseling services. Lack of family support and financial assistance are other barriers that rural learners face. (p. 21)

There are regional differences among rural areas in the United States and differences in problems and needs (McCannon, 1983). Low population density is common to all rural areas. In their educational needs and in the barriers to education that confront them:

> Rural adult learners look like, act like, and learn like urban adult learners. The certified public accountant, the teacher, the electrician, the nurse, and the engineer in a small town must meet the same type of continuing education requirements for occupational recertification as their urban counterparts. The artist, the poet, the writer, and the actor create their works just as their urban counterparts do. Likewise, both the rural casual learner and the degree seeker embark on their educational journey with the same hopes, expectations, and fears as urban residents. So, there are little or no differences. Rural learners have a quest for knowledge, too--only the location of their residence differs. For some, the difference in residence can be a limiting factor. Resources, jobs, and educational services are fewer. But, for those who exhibit the characteristics of independence and self-direction, their residential status opens up a world of independent learning. (p. 17)

Cross and McCartan (1984) identified three kinds of barriers to adult education:

> *Situational barriers* are those arising from one's situation in life at a given time. Lack of time because of responsibilities on the job or at home, for example, deters large numbers of potential learners aged 25 to 45. Lack of money deters young people and other low-income individuals; lack of child care deters young parents. *Institutional barriers* consist of all those practices and procedures that exclude or discourage working adults from participating in educational activities-- inconvenient schedules or locations, full-time fees for part- time study, inappropriate courses of study, for example. *Dispositional barriers* relate to people's attitudes and perceptions of themselves as learners. Many older citizens, for example, feel that they are too old to learn. Adults with poor educational backgrounds frequently lack interest in learning or confidence in their ability to learn. (p. 37)

In a survey (McCannon, 1985) of adults enrolled in five higher education institutions in

rural settings in Iowa, Illinois, Minnesota, North Dakota, and Wisconsin, it was found that distance, costs, time, and self-confidence were greater obstacles to women than to men and that conflicts with jobs and lack of desired courses were more frequently cited as obstacles by men. Both men and women considered the need for financial aid, information, and time off from work as important factors affecting their participation in higher education. More women than men expressed the need for babysitting services, family support, and increased self-confidence. The respondents indicated a preference for late afternoon and evening courses, weekend courses, and "clustered" courses in a program during a concentrated time once a week.

Informational and psychosocial barriers are "less obvious and in some ways more fundamental in accounting for participation or lack of participation" (Darkenwald & Merriam, 1982, p. 137) in adult education than other types of barriers. Knowledge of adult education resources varies with socioeconomic status and community size (Johnstone & Rivera, 1965). Low socioeconomic status and residence in rural areas are associated with lack of information. A link also exists between psychosocial barriers, which are individually held beliefs, values, attitudes, or perceptions that inhibit participation, and low socioeconomic status (Darkenwald & Merriam, 1982, p. 137).

From his vantage point as dean of a rural continuing education program that was developed in consultation with over 40 educational service providers and over 4,000 adult learners, Treadway (1984) identified a need for institutions of higher education to relate their institutional missions to rural residents. In his 1979-82 study funded by the Fund for the Improvement of Postsecondary Education, he observed that once a commitment to serve rural people and communities is included in an institutional mission statement, the institution can fulfill the following types of roles: (a) direct provider of programs and services, (b) broker for rural communities, and (c) collaborator in jointly offering programs and services with other institutions and agencies. In addition, he elaborated upon issues for both national and state policy. Those issues included: (a) an urban bias in the allocation of federal education dollars, (b) a need to recognize the diversity of rural American in federal policy, (c) a need for policy input at the federal level by rural education, (d) federal initiatives to develop and use communications technology for delivering educational programs to rural residents, (e) federal support for the "systematic collection, compilation, and analysis of the status of participation in rural adult education" (p. 51), (f) regionalization of state higher education policy making and administration, (g) input by rural educators to state policy making, (h) coordination of publicly-funded institutions of higher education that serve a given rural area, (i) improved communications between state policy makers and rural constituents, (j) reciprocity between or among states for state funding of out-of-state students, and (k) coordination of the rural development efforts of all agencies, public and private.

A team of researchers at Washington State University and the University of Idaho surveyed providers of educational services for rural adults and 47 rural adult learners in Alaska, California, Idaho, Montana, Oregon, Washington, and Wyoming to identify barriers to education (McDaniel, 1986). They found a similarity of perceived barriers among providers and learners across the seven-state region. The investigators classified barriers into the following categories: (a) personal/situational, (b) psychological, (c) informational, (d) institutional, and (e) state policy barriers. This research, which was an undertaking of the Northwest Action Agenda project, resulted in a set of 23 recommendations addressed to state educational policy makers, educational institutions, rural communities, and rural education practitioners. The investigators surmised:

> The single overriding area of agreement between educational providers and rural adult learners concerns the question of access to educational opportunities. Overwhelmingly, both groups feel that, when compared with their urban counterparts, the rural adult learner does not have equal access to educational programs. (p. 15)

The conclusion of the Northwest Action Agenda project that barriers to rural adult

education were not uniform across the seven-state region is relevant to the present study since there is an overlap in both geographic and chronological parameters between the two.

Statement of the Problem

During the summer of 1986 a modified Delphi survey was inaugurated to determine barriers to educational programs that affect rural adults and changes and policies required to improve access to education for rural adults in the state of Alaska, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. This region comprises about 47% of the land acre of the nation, but contained less than 9% of the country's population in 1980 (U.S. Bureau of the Census, 1983). The region had a population density of 11.9 people per square mile, compared with 64 per square mile for the United States as a whole. Survey respondents were college and university faculty and administrators, rural adult educators, legislators, rural teachers and school administrators, county extension agents, regional educational service agency (RESA) personnel, state education agency (SEA) staff, and others in the 13 states. The purpose of this report is to summarize this 13-state survey on educational barriers confronting rural adults, actions needed to provide adequate educational opportunities for rural adults, and public policies needed to reduce barriers to education and/or improve educational opportunities for rural adults (Easton, 1988, 1989a, 1989b).

Methodology

The study was conducted by means of a three-round modified Delphi survey. The mailing list of the National Action Agenda for Postsecondary Rural Education was used to identify persons interested in education for adults in rural communities in the 13 states selected for the survey. In addition, the *County Agents Directory* was used to identify Cooperative Extension Service personnel working in rural areas of those states. The governors of the 13 states were asked to provide names and addresses of legislators serving on education-related legislative committees. Everyone on the National Action Agenda mailing list from the 13 states was placed on the mailing list for this study. Individuals were purposively selected for the survey from the lists of county agents and state legislators. In all, 798 persons were invited to participate in the modified Delphi activity.

A three-item open-ended questionnaire was used to solicit responses in the first round of the modified Delphi survey. Participants were asked to list three to five responses for each of the following items: (a) barriers to education that exist for rural adults, (b) actions that are needed to provide adequate educational opportunities for rural adults, and (c) public policies that are needed to reduce barriers to education and/or improve educational opportunities for rural adults. A total of 217 completed questionnaires was returned. Responses to the first two items were used to generate a 203-item questionnaire on barriers to education and actions required to provide adequate educational opportunities for rural adults for the second round of the modified Delphi survey. Of the 203 items on the questionnaire, 78 dealt with perceived barriers, and 125 dealt with proposed actions to overcome them. Responses to the third item were used to derive 89 public policy statements to be evaluated by participants in the third round of the study.

The second-round questionnaire was mailed to the 217 first-round respondents in March of 1987. Participants were asked to evaluate 78 statements of educational barriers by indicating the extent of their agreement with them on a five-point Likert-type scale. In addition, they were asked to rate the desirability of 125 actions proposed to provide adequate educational opportunities for rural adults on another five-point scale. A total of 196 completed questionnaires was returned.

The third-round survey was mailed to all first-round participations in June of 1987. In this round, panelists were asked to evaluate the importance and the feasibility of 89 public policy proposals aimed at overcoming educational barriers encountered by rural adults. Once again, five-point Likert-type scales were employed. Respondents to the final round numbered 175. Chi square analyses were conducted to determine if there were significant differences (.05 level) in the respondents' perceptions as-

sociated with either the participants' geographic location within the 13-state region of the study or their differing roles in rural education.

Summary of the Data

There were 196 participants in the second round of the survey. The composition of the respondent group is presented in Table 1.

Table 1
Second Round Survey Participants

Roles	Plains	Mt.	NW	Total
Legislators	1	2	0	3
Adult Educators	2	8	3	13
College/University	21	31	23	75
Coop. Extension	13	20	12	45
Rural Educators	2	10	0	12
RESA Personnel	0	9	2	11
SEA Personnel	2	10	4	16
Others	6	11	4	21
Total	47	101	48	196

Educational Barriers

Panelists identified 78 perceived barriers to education for rural adults in the first round of the survey. A majority of respondents confirmed 47 of those barriers by indicating their agreement with them on the second-round questionnaire. Ten of the barriers were validated by at least 75% of the respondents. Those barriers are listed below with the percentage of the respondents who answered either "strongly agree" or "agree" shown in parentheses:

- Sparse population combined with diverse educational needs. (91.7%)
- Distance of rural adults from college campuses. (90.3%)
- Excessive demands on time due to distance from educational programs. (79.2%)
- Fear of entering or re-entering the educational process. (78.1%)
- Lack of career and educational counseling services for rural adults. (76.5%)
- Budgetary constraints of educational institutions. (83.2%)
- High cost of delivering adult education to rural communities. (79.6%)
- Difficult (near impossibility) of completing a degree program in a rural community. (74.5%)
- Lack of federal and state funds in support of rural adult education. (79.1%)
- Lack of public financing for rural adult education. (78.1%)

The Chi-square analyses conducted on the responses to the 78 barrier statements yielded 17 significant Chi-square values. Eleven of those were associated with the respondents' geographic location, six with the differing roles of the panelists in rural education. However, only two of the significant differences in perception of educational barriers were in conjunction with the 10 barriers listed above.

"Budgetary constraints of educational institutions" were regarded as a barrier to educational opportunity by 83% of all respondents, including all of the legislators and over 90% of the college and university personnel and RESA staff members; however, only 50% of the rural teachers and administrators were in accord. Over 80% of the participants from the Mountain and Northwest Coast states validated the "high cost of delivering adult education to rural communities" as a barrier, but only 64% of those from the Plains states agreed.

Actions to Provide Educational Opportunities

Survey participants evaluated the desirability of 125 steps that could be taken to provide adequate educational opportunities for rural adults. They used a five-point Likert-type scale. At least 50% of the respondents affirmed the desirability of 111 of the 125 actions listed on the questionnaire. To highlight the results of this portion of the study, 20 of the proposed actions that were considered desirable to 85% or more of the panelists are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

- Incorporate adult education into mission statements of colleges and universities. (88.3%).
- Increase commitment to adult literacy. (88.3%)
- Offer courses for rural adults long enough for

them to develop a favorable reputation in rural communities. (86.7%)

- Obtain reciprocal agreements among colleges and universities within a state or within an interstate region to accept course work offered by each other in rural communities. (93.4%)
- Make public school buildings available for adult education. (93.4%)
- Develop interagency cooperation in providing programs for rural adult learners. (92.9%)
- Increase networking among rural school districts, governmental agencies, and community organizations. (90.8%)
- Work with existing community groups to develop educational opportunities for rural adults. (89.3%)
- Increase cooperation among colleges and universities and reduce concern for "territorial rights." (88.8%)
- Improve communication between postsecondary and K-12 educators. (85.7%).
- Design educational offerings to meet local needs. (94.9%)
- Develop college and university outreach programs. (92.3%)
- Involve rural adults in planning educational programs. (88.8%)
- Develop institutional arrangements to maximize the applicability of off-campus courses to on-campus degree programs. (88.3%)
- Conduct assessments of the needs of rural adult learners. (86.2%)
- Develop curriculums that can be delivered to rural adults via telecommunications. (86.2%)
- Combine high tech delivery systems with outreach efforts by "live" faculty. (90.3%)
- Develop information networks to inform rural adults of educational resources and financial assistance that are available to them. (92.9%)
- Identify funding sources to support rural adult education. (90.8%)
- Inform legislators of the educational needs of rural adults. (90.8%)
- Explain the educational needs of rural adults and justify programs for meeting them to educational policy makers. (85.2%)
- Create new kinds of scholarships to assist nontraditional students, including part-time and non-degree students. (88.3%)
- Offer incentives to college and university faculty to provide extension classes for rural adult learners. (86.2%)
- Identify educational resources presently available in rural areas. (89.3%)
- Develop positive attitudes toward lifelong learning among junior and senior high school students. (90.3%).

The Chi-square analyses performed to identify any significant differences among the respondent groups in their perception of the desirability of the proposed actions yielded 29 significant Chi-square values. Thirteen of the significant Chi-square values were associated with the geographic location of the respondents and 16 were with the panelists' differing rural education roles. Eight significant differences of opinion were connected to the 20 statements listed above.

More than 94% of the participants from the Mountain and Northwest Coast states found the proposal to "obtain reciprocal agreements among colleges and universities within a state or within an interstate region to accept course work offered by each other in rural communities" desirable, but fewer (89%) of those from the Plains concurred. On the proposal to "make public school buildings available for adult education," nearly 90% of the respondents from Washington, Oregon, and Alaska thought it desirable while no less than 94% of those from the Plains and the Mountain states indicated it was. About 95% of the respondents from the Mountain and Northwest Coast states thought it desirable to "increase cooperation among colleges and universities and reduce concern for 'territorial rights,'" but less than 80% of those from the Plains did. More than 90% of the participants from the Mountain states thought that offering "incentives to college and university faculty to provide extension classes for rural adult learners" was desirable, but only about 80% of those from the Plains and the Northwest Coast states thought so. No less than 90% of all respondents, including 98% of those from the Plains states, said it would be desirable to "develop positive attitudes toward lifelong learning among junior and senior high school students" in rural schools, but a smaller number (86%) of the respondents from the Mountain states were in agreement.

Nearly 87% of all respondents considered the proposal to "offer courses for rural adults long enough for them to develop a favorable reputation in rural communities" desirable. However, only 75% of the rural school teachers and administrators and 69% of SEA personnel responding thought so.

Almost 93% of all participants but only 87% of those from the Plains subregion agreed on the desirability of developing "interagency cooperation in providing programs for rural adult learners." At least 90% of every role category thought that this proposal was desirable, but only one of the three legislators participating in the second round of the survey agreed.

Policies Proposed to Improve Access to Education

In the third round of the survey participants were asked to rate the importance and the feasibility of 89 public policy statements that had been generated in the first round. Third-round questionnaires were returned by 175 respondents who had participated in at least one of the previous two rounds of the study. The composition of this respondent group is reported in Table 2.

Table 2
Third Round Survey Participants

Roles	Plains	Mt.	NW	Total
Legislators	2	2	0	4
Adult Educators	1	3	3	7
College/University	19	30	18	67
Coop. Extension	12	16	10	38
Rural Educators	4	10	0	14
RESA Personnel	0	7	3	10
SEA Personnel	2	11	4	17
Others	6	9	3	18
Total	47	88	41	175

Of the 89 public policy statements, 22 were judged either "important" or "most important" by at least 75% of the respondents. Fourteen policies that were considered important by at least 75% of the respondents and feasible by at least 50% are listed below with the percent of the of the participants who rated the policy either "probably feasible" or "definitely feasible" shown in parentheses:

- Policy to encourage lifelong learning. (70.9%)
- State commitment to adult basic education. (69.7%)
- Provide rent-free space in public educational facilities for adult base education programs. (66.9%)
- Reciprocity among colleges and universities serving rural areas so that credits may be easily transferred and applied to degree programs. (66.3%)
- Federal and state commitments to adult literacy programs. (64.6%)
- Federal and state support for student loans and work- study programs for college-bound adult learners. (63.4%)
- On-the-job training for welfare recipients. (62.9%)
- Coordinate educational programs for adults with current and projected demand for job skills. (62.9%)
- Support creation of networks of electronically-linked colleges and universities within and among states that would offer joint programs for rural adults. (59.4%)
- School board policies or state legislation making public school buildings available for adult education programs free of charge. (57.7%)
- Support for state, regional, or national consortia for satellite programs. (57.1%)
- Recognition at the highest levels of federal and state governments that rural adults are an important resource and that educational programs are necessary for developing that resource to fulfill its potential. (56.6%)
- Reverse current public assistance polity that penalizes adults on AFDC who wish to obtain further education. (55.4%)
- Removal from public assistance programs of provisions that penalize adults for enrolling in educational programs. (52.0%)

Some policies, however, that were judged to be important were considered feasible by less than 50% of the survey participants. Eight of the 22 policies that were evaluated as "important" or "most important" by at least 75% of the participants were identified as "probably feasible" or "definitely feasible" by less than 50% of the

respondents. Those policies are listed below with the percent of respondents who found them probably feasible" or "definitely feasible" shown in parentheses:

- Re-allocation of funds from obsolete rural education programs to new programs that meet current needs. (46.3%)
- State subsidies for educational services in sparsely-populated areas. (45.7%)
- Equal educational opportunity for all residents of a state. (45.7)%
- Alternatives to enrollment-driven funding formulas for educational programs that serve rural adults. (42.9%)
- State commitment to support lifelong learning for all persons. (42.3%)
- Subsidies to rural continuing education courses so that courses need not be self-supporting. (41.1%)
- Adequate funding for rural libraries and media resource centers. (38.3%)
- Increased funding for adult education in rural areas. (35.4%)

Chi-square tests of independence conducted on responses to the third-round questionnaire yielded 44 significant Chi-square values. Cross tabulation of the responses on the importance of the proposed policies with the geographic locations of the respondents produced six significant Chi-square values. Analysis of the participants' perceptions of the importance of the policies in relation to their differing roles in rural education yielded 16 significant Chi-square values. Another seven significant Chi-square values indicated differences in perceptions of the feasibility of the proposed policies that were associated with the geographic location of the panelists; 15 pointed to differences of opinion related to the respondents' roles in rural education. Only four of the significant Chi-square values were associated with the 22 proposed policies listed above.

There was a high level of support (89%) among all participants for the policy of "state commitment to adult basic education," but 100% of the Northwest Coast residents rated it as "important" or "most important" compared to about 85% of the other respondents. In the Mountain states, 69% of the participants felt it was important to have "Federal and state support for student loans and work-study programs for college-bound adult learners" while 89% of those in the plains and 93% of the Northwest Coast states respondents rated it as important. "Adequate funding for rural libraries and media resource centers" received a favorable importance rating from about three-fourths of all respondents, but only one-fourth of the legislators in the survey were in accord with the majority. Sixty-five percent of the respondents from the Plains regarded a policy of "equal educational opportunity for all residents of a state" as feasible, but only 41% of the Mountain states and 34% of the Northwest Coast states respondents occurred.

Conclusions

Three conclusions were drawn from this study. First, there was broad agreement on the existence of educational barriers among the respondents across the 13-state region and across categories based on the roles they played in rural education. Further, a majority of the panelists in this study agreed on the desirability of a wide range of actions that could occur at all levels of the educational system in order to provide adequate educational opportunities for rural adults in the 13-state region. Finally, there was a broad base of agreement among the participants on policies aimed at improving access to education for rural adults.

Discussion

The participants in this modified Delphi survey were self- selected. The fact that 196 of the 217 first-round respondents chose to answer a 203-item questionnaire in the second round and that 175 of them answered another 89-item survey in the third round demonstrated a commitment to the process and suggested a high degree of involvement with education for rural adults. Nevertheless, the participants represented only themselves. Generalization from this sample is not recommended.

Confirmation of Educational Barriers

The barriers identified and validated in the 13-state region represented those types of barriers described in previous research (Cross & McCartan, 1984; Darkenwald & Merriam, 1982;

McDaniel, 1986). Twenty-two of the 47 validated barriers were classified as institutional barriers while 13 of them were categorized as personal/situational barriers. Twelve of the validated barriers were grouped under the headings of psychological, informational, or political barriers.

Approaches to Opening Educational Access

Participants in this study appear to have agreed with Treadway (1984) in his call for institutional reforms aimed at opening access to educational programs to rural residents. The results of this investigation suggest the efficacy of state and/or regional efforts to ameliorate the inequality of educational opportunity perceived by knowledgeable persons.

The respondents in this study saw stronger commitments and more favorable arrangements as ways for postsecondary education to be extended to more rural adults. Community colleges and land-grant universities were identified as institutions that should have specific missions to educate rural adults.

The participants seemed to view interagency and interinstitutional coordination as an especially important area for action, judging by the number of measures generated and validated under this category. Clearly, they felt that colleges, universities, school districts, government agencies, and community organizations should work together to serve the educational needs of rural adults without regard for state lines or service area boundaries. Respondents indicated that rural citizens should be given access to educational programs from all available sources through lifelong learning centers, public school systems, colleges, or other brokers such as educational cooperatives. The emphasis emerging from this portion of the study was on empowering and, perhaps, compelling existing agencies and institutions to serve rural adults. The participants preferred to do this through a decentralized system rather than by a more centralized one. A proposal to place responsibility for coordinating rural adult education in a state in a single university was rejected by a majority of respondents. Also, there was little support for the creation of additional layers of bureaucracy. Although one-half of the participants thought state policy-making boards for rural education would be desirable, only 30% thought establishing rural adult education districts with local trustees was a good idea.

Another major area of concern was the curriculum available to rural adults. The participants indicated overwhelmingly that offerings should be based on the documented needs of rural adult learners. For participants in this study, the needs of rural adults were diverse--ranging from adult basic education to vocational education and college degree programs. The respondents emphasized flexibility (e.g., short courses, competency-based education, distance education, on-the-job training, and individualized education in programming for rural adults.

Survey participants supported a variety of alternative methods for delivering educational programs to rural adults. However, 90% of the respondents indicated the desirability of combining "high tech" delivery with the "high touch" of outreach by "live" instructors. In fact, those who participated in this study proposed increasing the number of instructors at remote learning sites by offering incentives to college and university faculty and by using noncollege rural residents as paid or volunteer providers of educational services. In addition, participants gave strong endorsement to several measures aimed at increasing instructional support services and making better use of existing educational resources in rural communities.

Survey participants would attempt to overcome informational barriers to rural adult education by a variety of means. They said it was desirable to publicize adult education programs through brochures, newsletters, and spot announcements on radio and TV. In addition, the participants thought public relations and news media should be used to persuade rural adults that education can be beneficial to them.

Having identified barriers to education for rural adults, the panelists recommended increased public support for adult education in rural areas. Most respondents thought that both public and private financial support should be given to rural adult education.

In the area of student services and financial assistance, participants favored some changes in

current practice. Most of those responding to the second-round questionnaire found scholarships for part-time and non-degree students desirable. They also recognized a need for child care and pre-school programs to assist adult learners who have children. Further, the participants would like to see programs implemented to help rural adults adapt to formal educational programs.

The participants linked reforms in rural elementary and secondary schools to advance in rural adult education. They said that rural schools should develop attitudes for lifelong learning and be nonsexist in their aspirations for students. They also favored extracurricular enrichment programs in rural high schools but not at the expense of diminished athletic programs.

There were relatively few statistically significant differences in perception with respect to the desirability of the steps proposed to provide adequate educational opportunities for rural adults among the various subgroups in this study. It is not surprising that there were some differences of opinion associated with the geographic location of the panelists given the vast expanse of the 13-state region. Although there were only a few significant differences in perceptions related to the roles respondents played in rural education, some of those differences were on fundamental issues and invite closer scrutiny.

There appeared to be some issues that involve struggles over "turf." For example, on the issues of leadership in providing education for rural adults and greater support for land-grant universities, college and university personnel and Cooperative Extension agents favored a leadership role and increased support for land-grant universities to a much greater extent than respondents from regional and state education agencies. On the other hand, college and university people differed from rural K-12 educators, RESA staff, and SEA personnel on the proposal to allow public schools to offer postsecondary courses in communities not served by any college.

The three legislators who participated in the second round of the survey favored increased funding for rural adult education, greater support for land-grant universities, a leadership role in rural adult education for land-grant universities, subsidization of low-enrollment courses in rural communities, and provision of postsecondary courses by public schools. They did not find interagency cooperation in planning programs for rural adults, state university faculty assistance in establishing community education programs, improved compensation for instructors of rural adults, or the creation of regional lifelong learning centers desirable. They seemed to think that existing institutions with a little more help could meet the educational needs of rural adults better than new agencies at the local level or new cooperative arrangements among established agencies could.

Agendas for Public Policy Deliberation

The policy ideas that were considered both important and feasible by a majority of participants in this study form an appropriate agenda for discussion by policymakers across the 13-state region. They include proposals for consideration by both federal and state officials in the areas of education, welfare, job training and placement, and community development. It is noteworthy that a strong majority of the respondents rated "policy to encourage lifelong learning," "state commitment to adult basic education," and "federal and state commitments to adult literacy programs" as both important and feasible. Those statements simply call for governmental commitments to adult education. Participants seemed to be saying that such commitments were lacking and would be a good place to begin developing a comprehensive policy on adult education that would increase access to educational programs for all adult learners including those who live in rural communities.

Another agenda suggested by this study consists of the policy proposals that were considered important by a majority of the respondents but feasible by less than one-half of them. Energies might be invested in seeking ways to make more feasible ideas such as state subsidies for educational services in sparsely- populated areas, alternatives to enrollment-driven funding formulas for educational programs that serve rural adults, and equal educational opportunity for all

residents of the state.

The composition of this group of respondents hints at the nature of panels that might be convened to develop federal, state, and regional policies aimed at reducing barriers to adult education for rural residents. Since most of the significant differences of opinion in this study were associated with the diverse roles the respondents played in the educational system, it might be useful to facilitate face-to-face deliberations among similarly-comprised groups in order to develop agenda for action in each of the states and subregions represented in this study. These constituencies might also be involved in efforts to shape and influence policy at the federal level and across state lines through interstate compacts. In addition, rural adult learners should be included in the policy-making process.

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Development and Utilization of Professional Literature: A Survey of Adult Education Professors

Ralph G. Brockett

Introduction

Development and utilization of a knowledge base is vital to the establishment of any given field of study. In the field of adult education, a body of professional literature has been evolving in North America since the 1920s. The publication of such books as *The Meaning of Adult Education* (Lindeman, 1926) and *The Meaning of a Liberal Education* (Martin, 1926) and the establishment of the *Journal of Adult Education* in 1929 are but a few of the earliest efforts to recognize adult education as a field of study. However, adult education continues to struggle with criticisms from within and outside of the field that the status of the field is "marginal" and that the quality of research emanating from the field is minimal. If the development of adult education as a field of study is worthwhile endeavor, it would seem appropriate to consider the extent to which criticisms such as these are warranted. One way to accomplish this is by exploring the activities of those who contribute to and utilize the knowledge base of the field.

This exploratory study was designed to serve two purposes. First, it describes the ways in which professors of adult education contribute to their professional literature. Two previous studies (Garrison & Baskett, 1987; Long, 1977) have examined publication activity among adult education professors; however, the one study was based solely on data obtained from the vitae of the respondents while the other focused on a specific groups of *active* writers. To date, the general publication patterns across the professorate of the field have not been studied. In addition, this study provides descriptive information about how these professors utilize the professional literature and the value they ascribe to this literature.

The following questions provided a general framework for the study. (a) What are some of the writing patterns of adult education professors? (b) How extensive is the publication activity of adult education professors? (c) Which journals do adult education professors find most valuable? (d) How much value do adult education professors ascribe to their professional writing and reading activities?

Answers were sought to these questions to provide insights into how the professional literature is viewed by one segment of the adult education field. Such findings can have implications for the future development of adult education professional literature and for faculty development among adult education professors.

Writing for Publication

Much has been written about publication activity among college professors. In an extensive literature review, Boice and Jones (1984) cited studies suggesting that "the median number of scholarly publications" for academicians "is zero" and that "as few as 10 percent of writers in specific areas account for over 50 percent of the literature" (p. 567). Among the major reasons identified for the publication activity among most academicians were distractions and lack of time, writing blocks, personality and gender, discriminatory practices, the belief that writing is "inherently unhealthy", inherent difficulty in writing, and lack of instruction in writing.

In another study, Boice and Johnson (1984) reported on an investigation utilizing the Writing Habits Survey, a 12-item scale designed to provide information about writing patterns and practices, barriers to writing, and level of productivity. The survey was sent to all faculty at a doctoral granting university; a total of 400 individuals responded. It was found that over half of the faculty reported spending 2-10 hours per week on writing activity, that most individuals wrote in a "sporadic" pattern, and that 76% of the individuals thought about writing either daily or several times per week.

Within the adult education field, at least two efforts have been made to study publication activity among professors. Long (1977) asked members of the 1972 Commission of Professors of Adult Education to submit copies of their

vitae or a publications list. The 18 individuals who responded "reported 2,098 publications over their professional life spans" between the years 1950 and 1973; the number of publications ranged from 1 to 194 (p. 178). Of these publications, nearly 80% were either journal articles or miscellaneous publications such as research reports or conference proceedings. Books comprised slightly more than 10% of the publications. A second finding of the study was that *Adult Education* (now *Adult Education Quarterly*) and *Adult Leadership* (now *Lifelong Learning*) were two of the major journals in which professors published.

More recently, Garrison and Baskett (1987) interviewed 17 North American adult education researchers selected on the basis of their research productivity. It was noted that these individuals, who had research careers spanning an average of 18 years, "had each published an *average* of 38 articles, 9 book chapters, 4 books, and 6 monographs" (p. 91). Major trends emerging from the interviews included the following:

- Most interviewees reported using a variety of methodologies in their research and stated that they felt comfortable working in both quantitative and qualitative paradigms;
- Nearly all of the respondents identified an informal network; such networks usually consisted of colleagues from other universities, former students, junior colleagues from their own universities, and current doctoral students;
- Two "typical" writing styles were identified, and the group seemed to be about evenly divided in their approach: (a) those who use a detailed outline based on a systematic process and (b) those who being with a very basic theme and use the writing process itself as a way of gaining new insights; and
- Most of the interviewees stated that they block off a period of time for writing, prefer to write in a particular place, and on the average complete three drafts of a manuscript.

Based on these interviews, Garrison and Baskett concluded that new adult education researchers need to be concerned with asking the "right" questions and should be concerned with the overall quality of the research as opposed to the mere quantity of publications. In closing, noting the small number of individuals committed to adult education research, the authors state that "we need more researchers producing quality research if we hope to become more than an emerging discipline" (p. 95).

The studies by Long (1977) and Garrison and Baskett (1987) each provide valuable insights into writing for publication in adult education and are important contributions to the literature. However, Long's data are now about 15 years old and stress only the quantity of publications produced. Garrison and Baskett have utilized qualitative methodology in order to uncover many important insights into the writing process. However, since they dealt only with individuals who have been selected on the basis of their high level of productivity, their findings do not necessarily reflect the entire spectrum of the adult education professorate. The present study is an effort to build on these past efforts in order to broaden the current level of understanding relative to this research area.

Professional Reading

Turning briefly to the area of how publications are utilized, numerous studies have attempted to analyze the content of adult education literature (e.g., Brockett, 1982; Day, 1981; Dickinson & Rusnell, 1971; Fisher & Martin, 1987; Long & Agyekum, 1974; Rogers & Brockett, 1985). While these studies offer insights into the kinds of content that appear in the adult education literature, they do not address how the literature is utilized.

An exception was a study of Boyd and Rice (1986) who surveyed deans and directors of continuing education about several areas including information and publications that these individuals read. One question of this survey, which was mailed to 288 members of the National University Continuing Education Association (NUCEA), asked respondents to list up to five publications that "were being read for the purpose of staying current in research in continuing education" (p. 40). The 7 most widely read periodicals among the 131 respondents were *Continuum* (24%), *Journal of Continuing Higher Education* (10%), *Adult Education Quarterly* (7%), *Chronicle of Higher Education* (7%), *Lifelong Learning* (6%), *Journal of Higher*

Education (3%), and *Change* (3%). It should be noted that *Continuum* is the journal of the NUCEA and that it and the *Journal of Continuing Higher Education* are the two publications most specifically addressed to deans and directors of continuing education. While this study offered a beginning look at how the literature is utilized, it dealt specifically with a listing of preferred journals and does not explore question related to how helpful respondents find this literature.

Thus, there is a need to further understand both the ways in which individuals contribute to and utilize professional literature. Such an understanding can help in gaining a better idea of the current status and future prospects for the development of adult education as an academic field of study.

Method

Using questionnaires developed by Boice and Johnson (1984) and Boyd and Rice (1986) as a point of departure for identifying questions relative to professional writing and reading, a 27-item questionnaire was constructed to obtain descriptive information about the professional writing and reading patterns of respondents and the value ascribed to such activities. In addition demographic information about the respondents was gathered. Most items asked respondents to circle the number beside the appropriate response. In addition, one item asked individuals to identify the number and types of publications they had authored over a 3-year period. Finally, three open-ended items were included. The questionnaire was reviewed by several colleagues, and suggested changes were incorporated into the final version of the instrument.

The questionnaire was mailed along with a cover letter and a stamped postcard for obtained a summary of results to all "full" members of the Commission of Professors of Adult Education as determined by the October, 1986, mailing list. Of the 202 individuals who were asked to participate in the study, 106 responded to the request for return rate of 52.5%. In terms of demographic makeup, 83% of the respondents were male, the average age was 49 years, and 79% were at the rank of associate or full professor. Finally, respondents were asked to identify whether they viewed their primary focus either as a "practitioner" or as a "researcher/scholar". To this, 29.5% identified themselves as practitioners, and 59% described themselves as researcher/scholar. The remaining 11.5% circled both choices, sometimes commenting that they were unable to select one focus as primary.

A limitation of the study is the relatively low response rate. Because no attempt was made to code questionnaires before mailing, a follow-up mailing to nonrespondents was not possible. The decision to not code the instrument was deliberate, based on the realization that the topic is a potentially uncomfortable one. In their survey of faculty writing patterns, Boice and Johnson (1984) pointed out that a "record number of complaints" were received by the institutional review board of the university where their study was conducted with concerns about invasion of privacy generally cited (p. 35). Recognizing that a potential deterrent to participation in the present study might be the possibility of being identified, despite the fact that an assurance of confidentiality was offered in the cover letter, the survey was made completely anonymous. In fact, stamped postcard were included for those individuals wishing to receive a summary of the findings so that this could be returned separate from the questionnaire, thus further protecting confidentiality.

Since this study involves the gathering and analysis of data from two related but distinct areas, professional writing and reading, data is presented for each of these issues in separate sections. Within each section, general patterns, activities, habits, and attitudinal data are presented.

Professional Writing Activity

Writing Patterns

As a group, the professors of adult education who responded to this questionnaire demonstrated a wide range in terms of the amount of time devoted to publishing activity. When asked how often in a typical week they think about writing, 82% responded that they think writing either "daily" or "several times per week".

How does this compare to the amount of time actually spent in writing? While 9.4% reported spending 11 hours or more per week in writing, nearly 30% of the group spend one hour or less per week engaged in professional writing activity. The vast majority of professors (61.3%) spend between two and 10 hours on publishing. The various groupings for the number of hours per week spend in professional writing activity were as follows: 0--14.2%, 1--15.1%, 2 to 5--39.6%, 65 to 10--21.7%, 11 to 20--7.5%, and more than 20--1.9%.

A majority of professors (55.7%) reported their writing pattern to be "sporadic" while only 2.8% stated that they write on a daily basis. A rather large percentage (38.7%) claimed that they write either once or several times per week. In terms of *when* these individuals most frequently write, one-third of the respondents stated a preference for the morning hours. Only 16% stated a preference for either afternoon, evening, or late night times. However, the remaining 51% expressed a preference for writing at a combination of the above times. This would appear to support the "sporadic" writing pattern noted above. Preferred locations for writing include home (54.7%), office (28.3%) and different locations (10.4%).

A major aspect of the Boice and Jones (1984) study was consideration of various factors that serve as "facilitators" of writing. Three such factors were considered in the present study. These include the use of techniques designed to motivate writers, sources of feedback utilized in writing for publication, and the use of word processors. With regard to the first facilitating factor, the most frequently reported techniques included setting a schedule, seclusion, goal setting, and an upcoming conference presentation. Social pressure and rewards were used by relatively few of the respondents. The following percentage of respondents reported using these various techniques when writing for publication: Setting a schedule--(50.9%), seclusion--(47.2%), goal setting--(46.2%), feeling inspired to write--(35.8%), rewards and punishment--(19.8%), social pressure--(12.3%), and other strategies--(8.5%).

With regard to the second facilitator, it seems that professors use several different resources when writing. The most common of these are other adult education professors, which were identified by 59.4% of the respondents. Other sources of feedback include editors and reviewers (38.7% for each), other professors outside of adult education (34.9%), students (28.3%), and support groups (10.4%).

One additional aspect of writing habits that was considered is the use of a word processor in writing the publication. Of the professors responding to the survey, over half (56.6%) reported that they "almost always" use a word processor. Less than 25% stated that they "rarely or never" use a word processor. The remaining 19.8% utilize the word processor "frequently" or "occasionally" in their professional writing. This is a major departure from the Boice and Johnson (1984) study where 72% of the respondents "never" used a word processor, and while it is not appropriate to make direct comparisons between the contexts of the two studies, it would appear that the word processor has had a large impact on the writing habits of the adult education professorate in recent years.

Productivity

An important purpose of this study was to determine the actual publication activity of respondents in the three and one-half academic years prior of the study. Although the ranges varied from 0 to a high of 23 for the following areas, the professor's average productivity in the various types of publications was as follows: Journal Articles--4.49, Miscellaneous Reports--2.13, Conference Proceedings--2.03, Book Chapters--1.47, Book Reviews--1.35, Edited Volumes--.92, Book Monographs--.82, and Other Publications--.76. While there is a broad range of responses for each category, the means suggest that a rather large number of publications *are* being produced by adult education professors.

Perceived Value of Publishing Activity

To what extent to professors of adult education find value in writing for professional publication? To address this question, respondents were asked to consider the reasons that they

write, the pressure they feel about writing, the satisfaction derived from writing, and the extent to which writing is perceived to impact on teaching. Professors were asked to identify the major reason they write for publication. Nearly half of the respondents (47.6%) identified personal satisfaction and fulfillment as the primary reason. Other reasons cited include expectations for promotion and/or tenure (28.2%), financial gain (2.9%), pressure from colleagues (1%), other reasons (8.7%), and more than one of the above reasons (11.7%).

Given the emphasis on "publish or perish" that is often stressed throughout academia, it would seem appropriate to attempt to understand the extent to which adult education professors perceive themselves to be under pressure to publish. Among this group, the pressure to publish seems to be very real. Nearly 70% of the respondents stated that they feel either a "great deal of pressure" or "some pressure" to publish. This would seem to compliment the above finding that a substantial number of individuals reported the major reason they write for publication is to meet expectations for promotion and/or tenure.

It was also noted above that the major reason for writing was personal satisfaction and fulfillment. Thus, it could be anticipated that a high level of satisfaction would be noted among professors who write. In fact, 59.2% stated that they derive a "great deal of satisfaction" from writing while 30.1% fell into the "some satisfaction" category. Only 10.7% stated that they derive little or virtually no satisfaction from this activity. This finding is particularly encouraging, given that a positive attitude would seem essential if the field of adult education is to assume a proactive approach to developing its literature base.

Finally, a controversial question throughout academia is the link between research and teaching. In this study, respondents were asked to describe the extent to which they believe professional writing enhances teaching effectiveness. They reported the following perceived degree to which professional writing enhances teaching effectiveness: Greatly--43.1%, Somewhat--39.2%, Little--14.7%, and Detracts--2.9%. As the findings indicate, professors of adult education seem to feel that professional writing *does* have a positive influence on teaching. While it is often assumed that research and teaching are linked, there is empirical evidence to refute this claim (e.g., Centra, 1983; Webster, 1985). The findings of this study seem to provide evidence in opposition to rebuttals of the claim. However, two points must be kept in mind. First, this study was concerned with professional writing activity in the broad sense and not with just research. Second, these findings focus on the perceptions of respondents and not on their actual behaviors. While it can be argued that the perceptions of the individuals are as appropriate a measure as a objective assessment of actual behavior, further research would be appropriate before too large a claim could be substantiated relative to this issue.

Professional Reading Activities

When asked what types of articles they preferred for their professional reading, 61% reported a preference for "articles with a research theory focus", 23.8% identified a preference for "articles with a practical focus," and 13.3% circled both choices. The respondents were asked to rate the value of the adult education professional literature to them in their role as a professor. On a scale of one ("least valuable") to four ("most valuable"), a mean of 2.16 with a standard deviation of .86 was found. This suggests that perceptions of value relative to the adult education literature leaned toward the negative end of the continuum. Further a *t*-test did not reveal significant differences on this item between those professors identifying themselves primarily as researchers/scholars and those who view themselves more as practitioners.

The use of a four-point scale for this question could be viewed as a limitation of this study since such a scale does not allow for as fine a level of discrimination as a scale with more points. Thus, this item should be viewed with a bit of caution. Still, the point that many professors perceive the value of the literature to be rather low is an important point; one that perhaps should be examined further in future studies.

In an open-ended question, respondents

were asked to identify up to five journals that they believed to be "most useful" to them as adult education professors. A total of 109 journals were listed, and a mean of 3.8 journals were selected by each respondents. Journals that were identified by five or more adult education professors are as follows: *Adult Education Quarterly* (87), *Lifelong Learning* (68), *Training and Development Journal* (25), *Convergence* (16), *International Journal of Lifelong Education* (13), *Educational Gerontology* (11), *Training/HRD* (10), *Adult Literacy and Basic Education* (9), *Phi Delta Kappan* (9), *Harvard Educational Review* (7), *Educational Researcher* (7), *Continuum* (5), *Gerontologist* (5), and *Comparative Education Review* (5). These findings indicate that aside from the two most frequently identified journals, *Adult Education Quarterly* and *Lifelong Learning*, and besides *Training and Development Journal*, there are few journals that would appear to represent a "core" body of valued sources for professors of adult education. At the same time, the findings suggest that professors draw from a wide range of sources and often combine reading journals from within the field with publication from outside of adult education.

It should be noted that the much higher selection frequencies could be due in part to the fact that the Commission of Professors is a unit within the American Association for Adult and Continuing Education, the association that publishes both the *Adult Education Quarterly* and *Lifelong Learning*. Just as Boyd & Rice found that the most widely read journal in their study was the one published by the association from which their survey respondents were selected, the present findings must be considered in light of this point. At the same time, the vast differences between these and the other journals listed is evidence that these publications are valued by a large majority of adult education professors in the U.S. and Canada.

Does professional reading enhance teaching effectiveness? According to respondents in this study, the answer is a very strong "yes". Nearly three-quarters of the group (73.6%) stated that professional literature "greatly enhances" one's effectiveness as a teacher. Slightly over 21% responded in the "somewhat enhances" category, while less than 5% claimed that reading "does little" to enhance their teaching effectiveness. Keeping up with professional literature in the field is thus seen as a very important part of professional development activity among professors of adult education.

In order to look further at the relative importance of professional reading activity, Spearman correlation coefficients were calculated for several of the attitudinal and productivity variables relative to both reading and writing. First, the number of hours spent reading is related to the extent to which reading is viewed to enhance teaching effectiveness ($r = .26$; $p = .01$). This should come as no surprise since those who value reading activity would be expected to spend more time in that activity. Second, there is some evidence of a link between writing and reading activity in that significant relationships were found between the number of hours spent writing and reading ($r = .17$; $p = .05$) and between hours spent writing and perceived value of the adult education literature ($r = .18$; $p = .05$). Finally, a relationship was found between the extent to which writing and reading were found to enhance teaching effectiveness ($r = .25$; $p = .01$). In other words, those who feel writing enhances teaching effectiveness are also likely to find reading to be an enhancing factor. While these findings suggest possible relationships among several variables, it is important to recognize that the correlation coefficients, while statistically significant, are still fairly weak. For example, a correlation of .26 explains only about 7% of the variance attributable to the relationship. Thus, while these relationships are significant, they should be interpreted as offering at best tentative support for the relationships.

Discussion

What kinds of implications might be drawn from these findings? First, the data suggests that a broad range exists relative to the writing and reading attitudes and activities among this group. In terms of actual writing activity, the large percentage of respondents were similar to the Boice and Johnson (1984) group. Sixty-one percent of the present group reported spending 2-10 hours per week on writing as compared with 57% of the Boice and Johnson sample.

However, considerably more of the Boice and Johnson sample reported spending 11 or more hours on writing activity (28%) than the adult education sample (9.4%) and nearly twice the number of the adult education group reported spending one hour or less on such activity (15%, as opposed to 29.3%). While it is inappropriate to make direct comparisons between findings of the two studies, the observation that nearly one-third of the adult education professors reported devoting virtually no time to writing activity might be cause for concern to those who view writing as vital to the development of the field's knowledge base. At the same time, the actual number of publications reported offers evidence that, indeed, professors *are* making an effort to build the literature base of adult education through their contributions.

In addition, the findings relative to writing activity and perceptions of teaching effectiveness offer evidence pertaining to a question that has long been the subject of debate in academia; namely, the question of whether doing research enhances one's effectiveness as a teacher. Professors of adult education seem to feel that professional writing *does* have a positive influence on teaching. While it is often assumed that research and teaching are linked, there is empirical evidence to the contrary (e.g., Centra, 1983; Webster, 1985). The findings of this study seem to provide evidence in opposition to these views. However, it is important to bear two points in mind. First, the present study is concerned with professional writing activity in the broad sense. It is not limited to just consideration of research activity. Clearly, while research implies scholarship, not all scholarly activity can be considered to be research. Second, these findings focus on perceptions of respondents and not on their actual behaviors. Although it can be argued that the perceptions of the individuals are at least as appropriate a measure as an "objective" assessment of actual behavior, further research would be appropriate before too large a claim could be substantiated relative to this issue.

Finally, while the findings related to writing reflect a very broad range of activity, reading activity trends seem a bit easier to interpret. Nearly 87% of the respondents reported spending between 2-20 hours reading while over half reported between 6-20 hours for this figure. Combined with the findings relative to reading and teaching effectiveness, this offers evidence to support the importance of reading as a professional development strategy for adult education professors. At the same time, a somewhat negative view of the adult education literature suggests that despite limitations due to the way in which the question was scored, many professors are not as pleased with the current state of the literature as they might be.

Conclusion

When considering possible implications of the findings from this study, several questions come to mind. How adequate is the current level of scholarly productivity among adult education professors, especially given the traditional orientation toward practice that has existed within the field? How might graduate preparation and faculty development opportunities facilitate increasingly positive attitudes and increased publishing activity among adult education professors? What might be done in order to strengthen perceptions of the adult education professional literature? To what extent is it desirable to work toward the development of a truly "core" or "mainstream" adult education literature? What role might professional associations play in the future development of professional literature? Also, given that the majority of professors who responded to this survey were at the associate or full professor ranks, how do the writing and reading patterns of this group differ from those of professors who are just beginning their academic careers? Future research needs to move beyond the descriptive emphasis of this investigation to look more thoroughly at questions such as these.

As adult education attempts to expand its role as a field of study, the continued development of its literature base will be crucial. For example, if the broad area of adult learning is to be understood, who is in the better position to contribute to this understanding than those individuals who have made a commitment to this clientele? If the field of adult education is to take a proactive posture with regard to this knowledge base, it will be necessary to have an

increasing cadre of scholars contributing to the development of this literature. The findings of this study suggest that the potential for achieving this development clearly exists; however, it will be necessary to move beyond present productivity levels in order for this potential to be more fully realized.

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